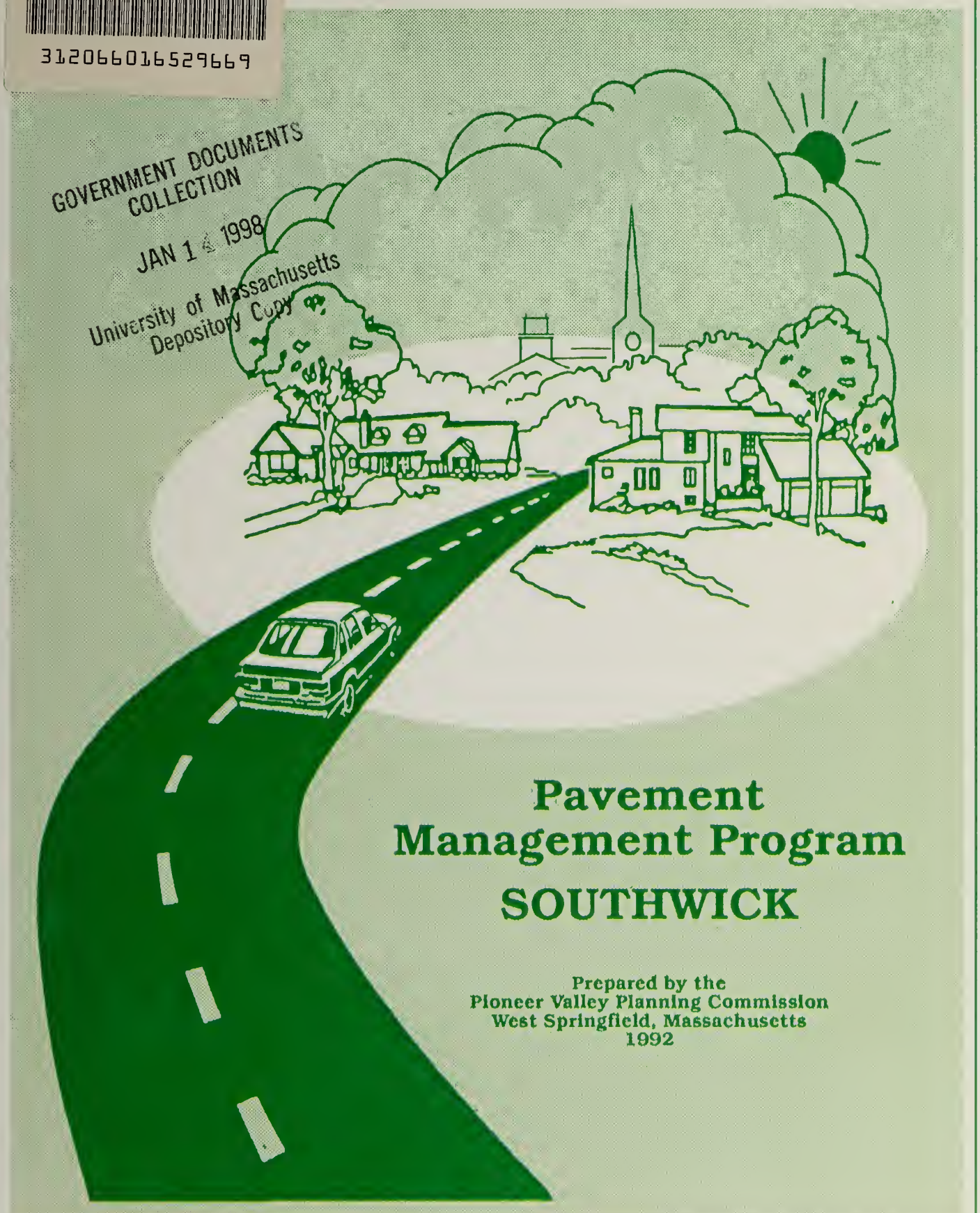

Pavement Management Program

SOUTHWICK

Prepared by the
Pioneer Valley Planning Commission
West Springfield, Massachusetts
1992

SOUTHWICK PAVEMENT MANAGEMENT REPORT

Evaluation and Forecast of Pavement Conditions and Maintenance Requirements

November 1992

prepared by the
Pioneer Valley Planning Commission
in cooperation with the
Town of Southwick Department of Public Works,
Christman Associates/VHB, Inc. and the **Info Center, Inc.**

Funding for this project was provided in part by the Massachusetts Highway Department and the U.S. Department of Transportation - Federal Highway Administration

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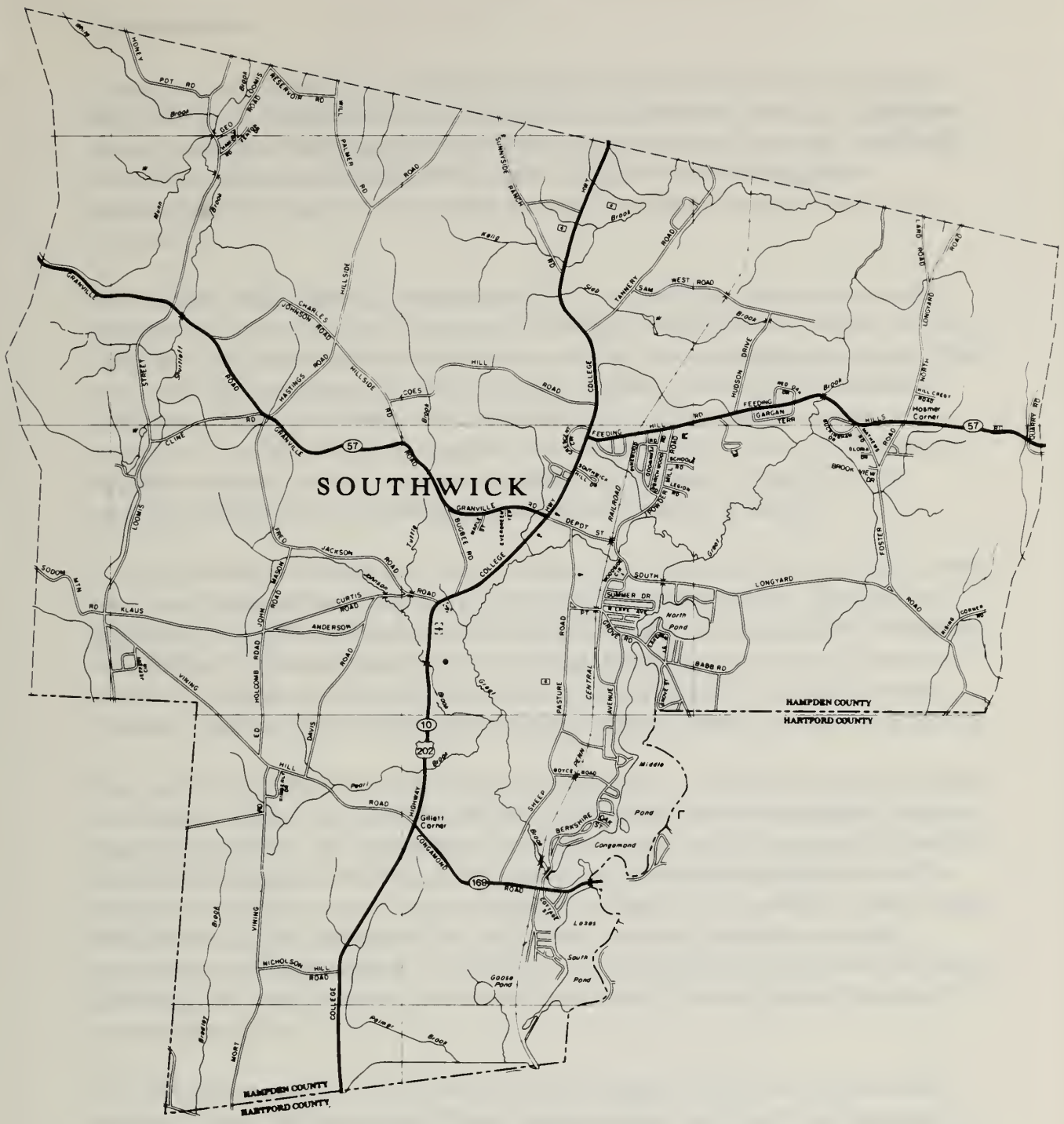


Southwick

Massachusetts

1/2 0 1 Mile

Prepared by the Pioneer Valley Planning Commission

I. Introduction

During the past several years a number of political, social, and economic trends have influenced the form and substance of local highway maintenance practices. Significant among them is the increasing pressure of fiscal austerity on local resources, specifically constraints on local tax revenues which make it difficult for the local highway superintendent or engineer to adequately meet the maintenance needs of roads in the community.

The Pioneer Valley Planning Commission (PVPC) in its effort to promote pavement management among its member communities conducts road condition, budget, and plan analyses to aid in the effective allocation of tax dollars to road maintenance needs. To do this, the PVPC has selected the "Road Manager" software developed by Christman Associates. The Road Manager can be customized to apply pavement management techniques to each municipality's specific roadway needs and priorities. A documented guideline of project priority, cost and scheduling is produced in a systematic and coordinated manner for our participating communities such as Southwick.

The Road Manager assesses the present pavement conditions and forecasts them annually based on a family of historically derived roadway deterioration curves. Through the application of improvement funds, various budget scenarios can be compared to identify the condition levels associated with an improving, stabilizing or deteriorating roadway condition performance. This report summarizes the findings of Southwick's present roadway condition survey and examines the implications of various investment scenarios.

The goal of the PVPC Pavement Management program is to provide Southwick with the knowledge and ability to administer effectively the limited amount of available roadway improvement funds. The knowledge of cost effective pavement management is based on research formulated by the lifetime performance of typical roadway segments and the application of maintenance at various stages of pavement life. The ability to readily apply this knowledge to all system roadway segments is packaged within the pavement management software program. The PVPC's use of this program emphasizes focusing on improving the overall roadway system condition through the intelligent application of maintenance dollars.

The first step toward the goal of preserving the integrity of the Town of Southwick's roadway system while conserving fiscal resources to the maximum possible extent is to prepare and publish a pavement management program. Continuing, cooperative efforts of the city, the Massachusetts Highway Department, and PVPC are necessary to assure that data and forecasts are periodically updated and that maintenance and improvement decisions are based on accurate information.

II. Methodology

Pavement inventory and distress data were collected by the Southwick Department of Public Works (SDPW) between the months of September 1991 and January 1992. The data package was received by the PVPC staff and applied to the pavement management software package, the Road Manager.

The Road Manager uses a Road Condition Index (RCI) as a measurement of roadway serviceability and as a method to establish performance criteria. RCI is derived from controlled measurements of conditions, including: pavement surface, rideability, drainage, safety, utility, traffic control, sidewalk, and roadside maintenance. These eight individual condition indices are based on inputs supplied to the Road Manager from the roadway survey. In analyzing the Southwick roadway system, pavement surface condition was considered to be of most importance; therefore greater significance was assigned to the Pavement Condition Index (PCI).

A Pavement Condition Index was generated for each inventoried roadway segment in Southwick using the distress data collected by the SDPW. Deduct values assigned to each type of distress based on severity and extent were applied to generate a PCI for each roadway segment. PCI is measured from 0 to 100, with 100 being an excellent condition and zero being poor condition. The PCI values generated are grouped into PCI category ranges which are defined by the user depending on the type and functional class of each segment. PVPC staff consulted with the local highway department in order to learn about the repair types that the city regularly performs and the associated unit costs of each repair type.

The PVPC incorporated 5 default repair categories: (1) reconstruction, (2) rehabilitation, (3) preventative maintenance, (4) routine maintenance, and (5) no action. Reconstruction involves the complete removal and replacement of a failed pavement section. The rehabilitation of pavements includes the work necessary to restore the pavement to a condition that will allow it to perform satisfactorily for several years. Preventative maintenance activities are those which are performed at planned intervals to protect and seal the pavement. Routine maintenance activities are those which are taken to correct a specific pavement failure or area distress. A more detailed description of these repair types can be found in the Glossary of Terms section of this report.

A list of repair strategies was developed based on the PCI ranges and road characteristics such as the base, functional class, pavement type, curb reveal, drain index, and utility index. The repair strategies simulate decisions which are consistent with SDPW repair practice and procedures. The Road Manager uses the repair strategies to assign a repair type to each roadway segment. Detailed and summary reports are produced by the Road Manager and can be sorted by street name, PCI, or benefit value. These reports provide the most recent survey condition information collected on the segments as well as the required repair types and associated costs. This information can also be displayed graphically.

The budgeting process of the Road Manager calculates the amount of funds needed to achieve desired roadway condition ratings for the present year. In this process, a percentage of roadways at or below a given condition index range is entered into the computer. The Road Manager then prepares an asphalt budget report that provides the number of miles of roadway to improve by repair type and the required budget by repair type. This information is also provided graphically.

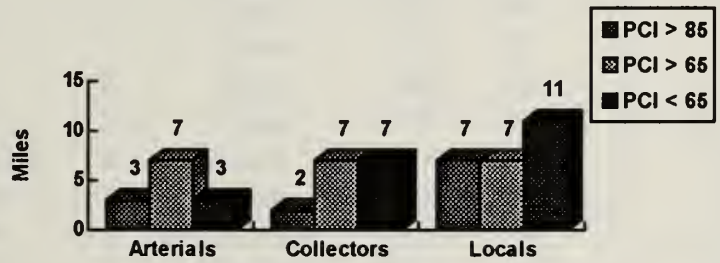
In the planning process, the Road Manager applies the present and future assigned budget to needed system repairs based on the highest project benefit value. This plan can be assigned for a maximum of 20 years into the future. For each plan year, the Road Manager prepares a future roadway condition projection, exhausts the assigned budget, and then produces reports on the end-of-year average PCI and miles of roadway for each PCI range. The Road Manager also allows the user to enter an inflation rate to account for estimated future costs.

III. Existing Condition Evaluation

The Town of Southwick's Department of Public Works (SDPW) surveyed 54 miles of improved roadways which constitute 118 roadway segments. The average PCI for the end of year 1991 (start of year 1992) was rated at 75, which indicates that majority of the roadways are in a moderately fair condition. The surveyed roadway segments are broken down as follows: 24% of the roadways have a PCI greater than 85 (good to excellent), 39% have a PCI between 65 and 85 (fair), and 37% have a PCI less than 65 (poor). The city has approximately 13 miles of arterial roads, 16 miles of collector roads, and 25 miles of local roads. The percentages are 25%, 30%, and 45%, respectively. The following figure summarizes the existing roadway conditions for each roadway classification. More detailed information is provided in Appendix B, Existing Conditions Summary.

Figure 1

Roadway Conditions at End of Year 1991



Based on 1991 Survey information.

Table 1 lists Southwick roadway segments which were determined to have a surveyed PCI of 100 at the end of year 1991. These roadway segments can be considered at the top of their performance ability. Table 2 lists the ten roadways which received the lowest PCI ratings.

Table 1
PCI Listing of the Top Rated Roadway Segments

Street Name	Sec ID	Functional Class	Length (ft.)	PCI	Repair Type	Cost
Bugbee Road	1	Collector	1220	100	5	$0.00
Dewitt Circle	1	Local	570	100	5	$0.00
Fred Jackson	4	Local	1491	100	5	$0.00
Granville Road	2	Arterial	8310	100	5	$0.00
Granville Road	3	Arterial	6500	100	5	$0.00
Great Brook Drive	1	Local	168	100	5	$0.00
Great Brook Lane	1	Local	365	100	5	$0.00
Hastings Road	2	Local	3048	100	5	$0.00
Humel Lane	1	Local	820	100	5	$0.00
Juniper Road	1	Local	410	100	5	$0.00
Kline Road	2	Local	1135	100	5	$0.00
Powder Mill Road	2	Collector	3464	100	5	$0.00
Sterrett Drive	1	Local	2335	100	5	$0.00

Based on data collected at end of year 1991.

Table 2
PCI Listing of the Worst Ten Roadway Segments

Street Name	Sec ID	Functional Class	Length (ft.)	PCI	Repair Type	Cost
Hudson Drive	1	Local	2133	46	1	$177,750
Industrial Road	1	Local	1505	44	1	$108,694
Evergreen Street	1	Local	357	44	2	$9,024
Sam West Road	1	Local	1111	43	1	$74,067
Sam West Road	2	Local	1081	42	1	$72,067
Sunny Side Road	1	Local	5757	42	2	$123,136
George Loomis Road	2	Local	2400	42	2	$51,333
Fred Jackson Road	1	Local	2165	41	2	$50,517
Vining Hill Road	4	Collector	4235	39	1	$282,333
Vining Hill Road	3	Collector	2835	36	1	$189,000

Based on data collected at end of year 1991.

The budgeting process of the Road Manager can be used to calculate the backlog of repair work for the town by assigning 100% of town roadway segments within the best PCI range (greater than 93). The backlog is defined as the cost of bringing all roads up to a near perfect condition within one year. The backlog represents how far behind the roadway network is in terms of its present physical condition and measures the cost of performing all desirable repairs to achieve the best PCI range. At the end of year 1991 the backlog repair work for the Town of Southwick was $5,651,000. This cost estimate is useful in identifying the pavement condition of the system at the end of year 1991 and in comparing to future and/or past year's backlogs.

After the backlog of improvement needs have been determined, the recommended maintenance actions for roadway segments are ranked by priority. The priority of segment improvement is determined based on its calculated Benefit Value (BV). BV is a function of vehicle volume, roadway length, estimated life of repair, improvement cost, and PCI, and it is a measurement of the benefit/cost ratio for each segment improvement recommendation.

Table 3 summarizes the town's top ten roadway segments in terms of benefit value. A complete BV listing is provided in Appendix B Existing Conditions Summary.

Table 3
Benefit Value Listing of the Top Ten Roadway Segments

Street Name	Sec ID	Functional Class	Length (ft.)	PCI	Repair Type	Cost	Benefit Value
Will Palmer Road	1	Local	1920	50	3	$608	576
Feeding Hills Road	2	Arterial	8430	77	3	$82,755	258
Feeding Hills Road	3	Arterial	4991	77	3	$50,575	250
Feeding Hills Road	1	Arterial	2980	83	3	$31,141	225
Congamond Road	1	Arterial	3838	70	2	$100,748	179
Congamond Road	2	Arterial	2714	73	3	$23,205	175
North Longyard Road	2	Arterial	4869	66	2	$104,143	155
Vining Hill Road	2	Collector	1395	87	4	$3,162	148
North Longyard Road	1	Arterial	2413	80	3	$16,811	131
Depot Street	1	Arterial	2478	79	3	$21,972	130

Based on data collected at end of year 1991.

Based on the BV calculations, the ten projects listed in Table 3 would benefit the most users (vehicle volumes) for the longest time period per dollar spent. As seen, a majority of the top ten segments listed in Table 3 are classified as arterial roadways and service the most traffic. However, most of these projects require extensive repairs and a correspondingly large financial investment. In the application of good pavement management practice, the program user should not simply administer funds based on BV list alone; a plan should be developed taking into account the availability of funding from state and federal sources, the repair type and cost before budgeting improvement funds.

IV. Budget/Planning Process

The budgeting process determines the required budget for each type of repair based on the available information supplied regarding the overall condition level desired on the roadway network. The planning process determines the most beneficial plan of improvement based on the amount of money available to spend for each repair type. Pavement management utilizes both these processes in developing an effective program.

A regressive maintenance program occurs when insufficient funds or no funds are invested in road repairs, resulting in a backlog of repairs which increases over time. An equilibrium maintenance program is where just enough money is spent each year to keep the PCI level and the backlog stable. A progressive program occurs when the application of improvement funds results in a reduction of the backlog over time. These scenarios were examined over a five year horizon to measure cost versus operating conditions.

Anticipated Budget

The anticipated budget for roadway improvements was provided by the SDPW. Historically, the SDPW receives approximately $125,000 in town funds to repair and reconstruct town roadways. This funding level was applied to the roadway segments based on a BV appropriation using the Road Manager program. Review of the network-wide PCI level for the town identifies that this level of investment represents a regressive maintenance program which results in a constant increase in the backlog of repairs from year to year. In this most typical situation, the budget that a community regularly allocates for roadway maintenance is insufficient to obtain overall future roadway condition performance levels which are equal to or better than the present. Table 4 shows the effects on the average PCI level and annual backlog as a constant budget is applied. This decline in PCI level is the result of the improvement rate being offset by the roadway deterioration rate. Also, the amount of needed repairs (backlog) increases as the PCI declines.

Table 4
Plan Summary of an Anticipated Budget

Year	Funding	PCI level	Backlog
1991	--	75	$5,651,000
1992	$125,000	74	$6,337,000
1993	$125,000	72	$7,554,000
1994	$125,000	69	$8,071,000
1995	$125,000	67	$8,670,000
1996	$125,000	66	$8,895,000

PCI levels represent end of year value.

Deferred Budget

This scenario represents a highly regressive maintenance program which results in a yearly increase in the backlog of repairs as well as a continuous decrease in the average PCI level . This scenario illustrates the effect on these performance measures if funds to maintain and improve town roadways were deferred to future years.

Deferment of the typical annual expenditures of $125,000 result in a sum of $625,000 after a five year period. This sum of funds was applied in bulk to the roadway network in year five to identify the severe consequences of deferring maintenance and repair activities as seen in table 5. Deferring funds to future years results in an increase in the backlog of $5,062,000. The accumulation of funds over the five year period does not satisfy the improvement needs for three primary reasons. Firstly, the absence of preventative maintenance causes the improvement needs to continuously regress to higher levels of repair at higher costs. Secondly, the pavement continues to deteriorate at a rate that increases over time. Thirdly, inflation throughout the five year period results in inflated improvement costs and a reduced dollar value. These factors lead to a drastically inflated backlog resulting in unachievable funding levels required to obtain acceptable roadway conditions. Table 5 shows the effects on the average PCI level and annual backlog as zero budget is applied.

Table 5
Plan Summary of a Deferred Budget

Year	Funding	PCI level	Backlog
91	--	75	$5,651,000
92	$0	73	$6,461,000
93	$0	69	$8,161,000
94	$0	65	$9,093,000
95	$0	62	$10,856,000
96	$625,000	62	$10,713,000

PCI levels represent end of year value.

Budget to Maintain Present PCI Level

This scenario represents an equilibrium maintenance program which results in a constant PCI level. In this situation, the present PCI level is maintained by investing sufficient funds which will offset the deterioration experienced by the roadway system. The equilibrium or "as is" scenario preserves the roadway investment until a progressive condition can be accomplished.

In the case of Southwick, the existing PCI level is quite typical. To achieve this level requires maintaining the average condition at an excellent level. This requires the application of improvement funds to be directed towards the most cost effective repairs. The cost effective repairs generally improve and /or maintain the segments which are salvageable and delay action on the segments which require reconstruction or major rehabilitation and whose condition can not deteriorate much further. Once the salvageable segments are in a stable condition, attention can be paid to the other more seriously deteriorated segments.

Table 6 shows the a budget scenario capable of maintaining an average PCI level approximately consistent with the present conditions.

Table 6
Plan Summary of a Constant PCI Level

Year	PCI level	Funding	Backlog
1991	75	--	$5,651,000
1992	75	$120,000	$6,261000
1993	75	$150,000	$7,626,000
1994	75	$155,000	$7,985,000
1995	75	$180,000	$8,908,000
1996	74	$250,000	$8,806,000

PCI levels represent end of year value.

Budget to Get to Optimal PCI Level

This scenario represents a highly progressive maintenance program which produces a zero backlog. In this most desirable situation, the budget required to bring all roadway segments up to a near perfect condition (top PCI range) is calculated and examined. It is important to realize that with recent budget constraints and cuts in almost all communities, this scenario may not be economically feasible. However, it is important for the municipality to learn about the backlog of repair work that may be increasing through a regressive maintenance program. Also, future roadway condition performance and associated costs to maintain the zero backlog is helpful in understanding and comparing the budget-condition relationship.

The following table shows the performance of the town's roadways if a progressive maintenance program were adopted. After spending the maximum amount of funds in the first year, the average PCI level increases considerably. As shown, a much lower budget is then needed to keep the average PCI level close to the previous year's figure. The budget fluctuates somewhat over the years, but it would never reach the funding level needed in the first year as long as the progressive maintenance program is in place.

Table 7
Plan Summary of a Zero Backlog Budget

Year	Funding	PCI level	Backlog
91	--	75	$5,651,000
92	$5,651,000	96	$0
93	$332,000	95	$0
94	$50,000	95	$0
95	$5,000	91	$0
96	$306,000	92	$0

PCI levels represent end of year value.

V. Summary

The role of pavement management in Southwick is to provide a way to improve road conditions in the most cost effective manner. Southwick officials will benefit from understanding the relationship between the roadway maintenance budget and future roadway conditions. Also, the highway superintendent will be able to provide objective information on road conditions and make cost-effective decisions on maintenance priorities and schedules. The improvement plan is a forecasting tool that the town can use to compute required budget levels to achieve desired roadway condition ratings.

The initial phase of pavement management is to look at the entire roadway network as opposed to a project by project approach. To determine the best way to improve the overall condition level is the primary goal, not to fix the roads that need the most repair. It requires far more money to stabilize the overall condition of a road network when even a small portion of the roads reach a condition of major investment (reconstruction or rehabilitation) than to attend to preventive and routine maintenance in a vigilant manner. Therefore, it is financially advantageous in the long-run for the town to attend to the roads which are in good to fair condition and can be prevented from deteriorating to a point where higher maintenance efforts are needed. Once this is done, the roads in poor condition can be addressed over time, and the backlog can be reduced.

It is important for the town to realize the effects of deferring timely road repairs. As the backlog of repairs increases, so does the required equilibrium budget. An effective pavement management program provides the community with an indication of the extent to which it needs to catch up in the repair of roads and how much this added effort will cost. Table 8 provides a summary of the four budget scenarios conducted for the Town of Southwick to identify the results of regressive, equilibrium, and progressive funding programs. As seen the timing and amount of funding impacts the performance condition as well as the end of year backlog amount.

Table 8
Budget Scenario Summary

Funding Scenario	5 Year Expendatures	5th Year PCI Value	5th Year Backlog
Anticipated Budget	$625,000	66	$8,895000
Deferred Budget	$625,000	62	$10,713,000
Constant PCI	$855,000	74	$8,806,000
Zero Backlog	$6,344,000	92	$0

The purpose of this report is to show how the Road Manager can be applied to a municipal pavement management program. The ability to construct various budget and scheduling scenarios allows the local official to forecast the needs and conditions of the roadway system. This insight also provides the advantage of "stretching" funds allocated to one of the municipality's greatest investments, the roadway network.

VI. Glossary of Terms

Base Index (BI): An index derived from controlled measurements and evaluations of the pavement condition survey distresses which can be attributable to the asphalt mixture and materials such as surface wear/raveling, corrugations, shoving slippage, bleeding, and polished aggregate. It is a rating established as an indicator of asphalt materials quality and performance on a scale from 0 to 100, with 100 being excellent.

Benefit Value (BV): The benefit value is computed by the Road Manager at the time it determines a recommended repair for a road section that is the most beneficial. The benefit value is derived from the following formula:

$$BV = \frac{365 * ADT * \text{Road Section Length} * \text{Estimated Life of Repair}}{\text{Current Cost} * \text{Condition Index}}$$

Where BV is the benefit value, ADT is average daily traffic, and Condition Index is the condition index for the road section for the type of work being done (PCI, DCI, UCI).

Deduct Values: Deduct values represent the penalty assessed for each identified distress and is used in the calculation of the Pavement Condition Index. Each distress has multiple severity and extent levels, with a specific deduct value at each level. Deduct values may be modified for all nine pavement distress types. The deduct value is ultimately subtracted from a perfect pavement condition of 100.

Drainage Condition Index (DCI): An index derived from controlled measurements and evaluations of pavement surface drainage deficiencies and conditions. It is a serviceability rating established for determining the present status or performance of the drainage features on a scale from 0 to 100, with 100 being excellent.

Functional Classification: Road functional classification attempts to place all streets and roads in the network into one of the three general categories, arterial, collector, and local streets, according to vehicle volume. The categories are based on geometric and traffic characteristics of each street type.

Maintenance: Anything done to the pavement after original construction until complete reconstruction, excluding shoulders and bridges.

Pavement Condition Index (PCI): An index derived from established measurements of pavement surface condition distress or deficiencies. It is a serviceability rating established under controlled conditions having a scale from 0 to 100, with 100 being excellent.

Pavement Management (PM): Pavement Management is the effective and efficient directing of the various activities involved in providing and sustaining pavements in a condition acceptable to the traveling public at the lowest life-cycle cost.

Pavement Management System (PMS): An established, documented procedure treating many or all of the Pavement Management activities in a systematic and coordinated manner. It consists of five essential elements structured to serve decision-making responsibilities at various management levels.

1. Pavement surveys related to condition and serviceability.
2. Data base containing all pavement-related information.
3. Analysis scheme.
4. Decision criteria.
5. Implementation procedures.

Pavement Performance: The assessment of how well the pavement serves the user over time. The engineer often associates pavement condition with an arbitrary, but quantifiable, value relating to pavement roughness, pavement distress, or pavement strength. Performance is the measured change of condition and/or serviceability over increments of time.

Pavement Types: Road Manager assigns three standard pavement types, bituminous concrete, surface treated, and composite, to the streets and roads. Pavement Types serve to inform pavement engineers of the operating condition of the street and provides a meaningful communication tool when engineering judgment is required to select possible rehabilitation alternatives.

Preventative Maintenance: Preventative maintenance activities are those which are performed at planned intervals to protect and seal the pavement. Seals are designed to provide one or more of the following benefits:

1. prevent the intrusion of air and moisture.
2. Fill small cracks and voids.
3. Rejuvenate an oxidized binder.
4. Provide a new wearing surface.

Reconstruction: Reconstruction is the complete removal and replacement of a failed pavement and might also involve features other than just pavement such as widening, realignment, traffic control devices, safety hardware, and major base and drainage work.

Rehabilitation: The rehabilitation of pavements includes the work necessary to restore the pavement to a condition that will allow it to perform satisfactorily for several years. Rehabilitation also includes the work necessary to prepare the pavement for an overlay. The major activities involved in the rehabilitation process are:

1. Partial depth patching.
2. Full depth patching.
3. Joint and crack sealing.

4. Grouting and undersealing (filling voids).
5. Grinding and milling (removal of high spots in the pavement).
6. Overlays.

Repair Strategies: The Road Manager represents repair strategies in a table of user defined *if, then* statements. The recommended repairs are based on seven decision factors: PCI range, Base Index, Surface Index, Functional Classification, Surface Type, Utility Index, and Drainage Index. These input conditions to the repair strategy table represent the various conditions for each decision factor.

Repair Types: Various choices of treatment available for providing a solution to a pavement deficiency or problem. The associated repair type cost is based on a locality's past experience.

Rideability: A measure of the smoothness of a pavement (traveled surface) as perceived by the public traveling in a vehicle at a speed appropriate for the particular surface.

Routine Maintenance: Routine maintenance activities are those which are taken to correct a specific pavement failure or area distress. Routine maintenance usually addresses localized pavement defects and includes activities such as:

1. Patching.
2. Skin patching.
3. Crack sealing.

Thresholds: The thresholds define various condition index ranges used in the determination of recommended repairs. These thresholds identify PCI ranges from 1 to 5, with 5 representing optimal conditions.

Utility Condition Index (UCI): An index derived from controlled measurements and evaluations of utility patches and utility iron conditions in the pavement surface area. It is a serviceability rating established for determining the present status or performance of the utility features on a scale from 0 to 100, with 100 being excellent.

VII. References

The Road Manager User's Documentation, Christman Associates and The Info Center, Inc.1989.

The Road Manager General Roadway Manual for Descriptions and Indices, Christman Associates and the Info Center, Inc, 1989.

APPENDIX A

Input Parameters

Deduct Values
Repair Types
Thresholds
Repair Strategies

SOUTHWICK
Asphalt Deduct Values
11/03/92

Pavement Distress	% AREA	EXTENT 0-1	>1-5	>5-10	>10
1. Potholes & Non-Util. Patches	L <1"	5	10	20	40
	M 1"-2"	10	20	30	45
	H >2"	15	30	40	50
2. Travel Lane Alligatoring	L Light	5	10	20	35
	M Medium	10	20	30	40
	H Heavy	15	30	40	50
3. Distortion	L Light	5	10	20	25
	M Medium	10	20	30	35
	H Heavy	15	30	40	45

Pavement Distress	% AREA	EXTENT 0-5	>5-50	>50-75	>75-100
4. Rutting	L .25-.5"	1	10	15	20
	M .5-1.5"	15	25	35	40
	H >1.5"	20	35	45	50
5. Weathering/Block Cracking	L <=.25"	1	5	15	30
	M >.25"	5	10	20	35
	H spalled	10	15	25	35
6. Transverse & Long. Cracking	L .25"	1	10	15	20
	M .25-.5"	5	15	20	25
	H >.5"	10	20	25	25

Pavement Distress	CONDITION	EXTENT LOCALIZED	EXTENSIVE
7. Bleeding/Polished Aggregate	L No Haz	1	10
	H Hazard	5	35
8. Surface Wear & Raveling	L Light	2	6
	H Heavy	5	10
9. Corrugations,Shoving,Slippage	L No Haz	1	25
	H Hazard	15	35

SOUTHWICK
Repair Types Setups
11/03/92

Repair Number	Repair Name	Unit Cost (sq.yds.)	Est. Repair Life (years)	Index Values After Repair
1	RECONST.OR RECLAIM	25.00	20	99
2	REHABILITATION	8.75	15	99
3	PREVENTITIVE MAINT.	2.85	5	97
4	ROUTINE MAINT.	0.85	4	97
5	NO ACTION	0.00	1	95
6		0.00	0	0
7		0.00	0	0
8		0.00	0	0
9		0.00	0	0

SOUTHWICK
Threshold Setups
11/03/92

Road Classification:	1 or 2	1 or 2	3	3
Pavement Type:	1	2 or 3	1	2 or 3
Pavement Condition Index #4 Threshold	93	85	90	80
Pavement Condition Index #3 Threshold	85	78	80	70
Pavement Condition Index #2 Threshold	72	65	70	50
Pavement Condition Index #1 Threshold	60	50	55	35

Base Index Threshold	65
Average Curb Reveal Threshold	4.1
Utility Index Threshold	65
Drainage Index Threshold	50

SOUTHWICK
Asphalt Repair Matrix
11/03/92

PCI	BASE INDEX	CURB REVEAL	FUNCTIONAL CLASS	PAVEMENT TYPE	UTIL INDEX	DRAIN INDEX	REPAIR CODE
1 Worst	1 Poor	1 Poor	1 Arte/Coll	1 Bituminou	1 Poor	1 Poor	1 RECONST.OR R
1 Worst	1 Poor	1 Poor	1 Arte/Coll	1 Bituminou	1 Poor	2 Good	1 RECONST.OR R
1 Worst	1 Poor	1 Poor	1 Arte/Coll	1 Bituminou	2 Good	1 Poor	1 RECONST.OR R
1 Worst	1 Poor	1 Poor	1 Arte/Coll	1 Bituminou	2 Good	2 Good	1 RECONST.OR R
1 Worst	1 Poor	1 Poor	1 Arte/Coll	2 Chip/Comp	1 Poor	1 Poor	1 RECONST.OR R
1 Worst	1 Poor	1 Poor	1 Arte/Coll	2 Chip/Comp	1 Poor	2 Good	1 RECONST.OR R
1 Worst	1 Poor	1 Poor	1 Arte/Coll	2 Chip/Comp	2 Good	1 Poor	1 RECONST.OR R
1 Worst	1 Poor	1 Poor	1 Arte/Coll	2 Chip/Comp	2 Good	2 Good	1 RECONST.OR R
1 Worst	1 Poor	1 Poor	2 Local	1 Bituminou	1 Poor	1 Poor	1 RECONST.OR R
1 Worst	1 Poor	1 Poor	2 Local	1 Bituminou	1 Poor	2 Good	1 RECONST.OR R
1 Worst	1 Poor	1 Poor	2 Local	1 Bituminou	2 Good	1 Poor	1 RECONST.OR R
1 Worst	1 Poor	1 Poor	2 Local	1 Bituminou	2 Good	2 Good	1 RECONST.OR R
1 Worst	1 Poor	1 Poor	2 Local	2 Chip/Comp	1 Poor	1 Poor	1 RECONST.OR R
1 Worst	1 Poor	1 Poor	2 Local	2 Chip/Comp	1 Poor	2 Good	1 RECONST.OR R
1 Worst	1 Poor	1 Poor	2 Local	2 Chip/Comp	2 Good	1 Poor	1 RECONST.OR R
1 Worst	1 Poor	1 Poor	2 Local	2 Chip/Comp	2 Good	2 Good	1 RECONST.OR R
1 Worst	1 Poor	2 Good	1 Arte/Coll	1 Bituminou	1 Poor	1 Poor	1 RECONST.OR R
1 Worst	1 Poor	2 Good	1 Arte/Coll	1 Bituminou	1 Poor	2 Good	1 RECONST.OR R
1 Worst	1 Poor	2 Good	1 Arte/Coll	1 Bituminou	2 Good	1 Poor	1 RECONST.OR R
1 Worst	1 Poor	2 Good	1 Arte/Coll	1 Bituminou	2 Good	2 Good	1 RECONST.OR R
1 Worst	1 Poor	2 Good	1 Arte/Coll	2 Chip/Comp	1 Poor	1 Poor	1 RECONST.OR R
1 Worst	1 Poor	2 Good	1 Arte/Coll	2 Chip/Comp	1 Poor	2 Good	1 RECONST.OR R
1 Worst	1 Poor	2 Good	1 Arte/Coll	2 Chip/Comp	2 Good	1 Poor	1 RECONST.OR R
1 Worst	1 Poor	2 Good	1 Arte/Coll	2 Chip/Comp	2 Good	2 Good	1 RECONST.OR R
1 Worst	1 Poor	2 Good	2 Local	1 Bituminou	1 Poor	1 Poor	1 RECONST.OR R
1 Worst	1 Poor	2 Good	2 Local	1 Bituminou	1 Poor	2 Good	1 RECONST.OR R
1 Worst	1 Poor	2 Good	2 Local	1 Bituminou	2 Good	1 Poor	1 RECONST.OR R
1 Worst	1 Poor	2 Good	2 Local	1 Bituminou	2 Good	2 Good	1 RECONST.OR R
1 Worst	1 Poor	2 Good	2 Local	2 Chip/Comp	1 Poor	1 Poor	1 RECONST.OR R
1 Worst	1 Poor	2 Good	2 Local	2 Chip/Comp	1 Poor	2 Good	1 RECONST.OR R
1 Worst	1 Poor	2 Good	2 Local	2 Chip/Comp	2 Good	1 Poor	1 RECONST.OR R
1 Worst	1 Poor	2 Good	2 Local	2 Chip/Comp	2 Good	2 Good	1 RECONST.OR R
1 Worst	2 Good	1 Poor	1 Arte/Coll	1 Bituminou	1 Poor	1 Poor	1 RECONST.OR R
1 Worst	2 Good	1 Poor	1 Arte/Coll	1 Bituminou	1 Poor	2 Good	1 RECONST.OR R
1 Worst	2 Good	1 Poor	1 Arte/Coll	1 Bituminou	2 Good	1 Poor	1 RECONST.OR R
1 Worst	2 Good	1 Poor	1 Arte/Coll	1 Bituminou	2 Good	2 Good	1 RECONST.OR R
1 Worst	2 Good	1 Poor	1 Arte/Coll	2 Chip/Comp	1 Poor	1 Poor	1 RECONST.OR R
1 Worst	2 Good	1 Poor	1 Arte/Coll	2 Chip/Comp	1 Poor	2 Good	1 RECONST.OR R
1 Worst	2 Good	1 Poor	1 Arte/Coll	2 Chip/Comp	2 Good	1 Poor	1 RECONST.OR R
1 Worst	2 Good	1 Poor	1 Arte/Coll	2 Chip/Comp	2 Good	2 Good	1 RECONST.OR R
1 Worst	2 Good	1 Poor	2 Local	1 Bituminou	1 Poor	1 Poor	2 REHABILITATI
1 Worst	2 Good	1 Poor	2 Local	1 Bituminou	1 Poor	2 Good	2 REHABILITATI
1 Worst	2 Good	1 Poor	2 Local	1 Bituminou	2 Good	1 Poor	2 REHABILITATI
1 Worst	2 Good	1 Poor	2 Local	1 Bituminou	2 Good	2 Good	2 REHABILITATI
1 Worst	2 Good	1 Poor	2 Local	2 Chip/Comp	1 Poor	1 Poor	2 REHABILITATI
1 Worst	2 Good	1 Poor	2 Local	2 Chip/Comp	1 Poor	2 Good	2 REHABILITATI
1 Worst	2 Good	1 Poor	2 Local	2 Chip/Comp	2 Good	1 Poor	2 REHABILITATI
1 Worst	2 Good	1 Poor	2 Local	2 Chip/Comp	2 Good	2 Good	2 REHABILITATI
1 Worst	2 Good	2 Good	1 Arte/Coll	1 Bituminou	1 Poor	1 Poor	1 RECONST.OR R
1 Worst	2 Good	2 Good	1 Arte/Coll	1 Bituminou	1 Poor	2 Good	1 RECONST.OR R
1 Worst	2 Good	2 Good	1 Arte/Coll	1 Bituminou	2 Good	1 Poor	1 RECONST.OR R
1 Worst	2 Good	2 Good	1 Arte/Coll	1 Bituminou	2 Good	2 Good	1 RECONST.OR R

PCI	BASE INDEX	CURB REVEAL	FUNCTIONAL CLASS	PAVEMENT TYPE	UTIL INDEX	DRAIN INDEX	REPAIR CODE
1 Worst	2 Good	2 Good	1 Arte/Coll	2 Chip/Comp	1 Poor	1 Poor	1 RECONST.OR R
1 Worst	2 Good	2 Good	1 Arte/Coll	2 Chip/Comp	1 Poor	2 Good	1 RECONST.OR R
1 Worst	2 Good	2 Good	1 Arte/Coll	2 Chip/Comp	2 Good	1 Poor	1 RECONST.OR R
1 Worst	2 Good	2 Good	1 Arte/Coll	2 Chip/Comp	2 Good	2 Good	1 RECONST.OR R
1 Worst	2 Good	2 Good	2 Local	1 Bituminou	1 Poor	1 Poor	2 REHABILITATI
1 Worst	2 Good	2 Good	2 Local	1 Bituminou	1 Poor	2 Good	2 REHABILITATI
1 Worst	2 Good	2 Good	2 Local	1 Bituminou	2 Good	1 Poor	2 REHABILITATI
1 Worst	2 Good	2 Good	2 Local	1 Bituminou	2 Good	2 Good	2 REHABILITATI
1 Worst	2 Good	2 Good	2 Local	2 Chip/Comp	1 Poor	1 Poor	2 REHABILITATI
1 Worst	2 Good	2 Good	2 Local	2 Chip/Comp	1 Poor	2 Good	2 REHABILITATI
1 Worst	2 Good	2 Good	2 Local	2 Chip/Comp	2 Good	1 Poor	2 REHABILITATI
1 Worst	2 Good	2 Good	2 Local	2 Chip/Comp	2 Good	2 Good	2 REHABILITATI
2 Poor	1 Poor	1 Poor	1 Arte/Coll	1 Bituminou	1 Poor	1 Poor	1 RECONST.OR R
2 Poor	1 Poor	1 Poor	1 Arte/Coll	1 Bituminou	1 Poor	2 Good	1 RECONST.OR R
2 Poor	1 Poor	1 Poor	1 Arte/Coll	1 Bituminou	2 Good	1 Poor	1 RECONST.OR R
2 Poor	1 Poor	1 Poor	1 Arte/Coll	1 Bituminou	2 Good	2 Good	1 RECONST.OR R
2 Poor	1 Poor	1 Poor	1 Arte/Coll	2 Chip/Comp	1 Poor	1 Poor	1 RECONST.OR R
2 Poor	1 Poor	1 Poor	1 Arte/Coll	2 Chip/Comp	1 Poor	2 Good	1 RECONST.OR R
2 Poor	1 Poor	1 Poor	1 Arte/Coll	2 Chip/Comp	2 Good	1 Poor	1 RECONST.OR R
2 Poor	1 Poor	1 Poor	1 Arte/Coll	2 Chip/Comp	2 Good	2 Good	1 RECONST.OR R
2 Poor	1 Poor	1 Poor	2 Local	1 Bituminou	1 Poor	1 Poor	2 REHABILITATI
2 Poor	1 Poor	1 Poor	2 Local	1 Bituminou	1 Poor	2 Good	2 REHABILITATI
2 Poor	1 Poor	1 Poor	2 Local	1 Bituminou	2 Good	1 Poor	2 REHABILITATI
2 Poor	1 Poor	1 Poor	2 Local	1 Bituminou	2 Good	2 Good	2 REHABILITATI
2 Poor	1 Poor	1 Poor	2 Local	2 Chip/Comp	1 Poor	1 Poor	2 REHABILITATI
2 Poor	1 Poor	1 Poor	2 Local	2 Chip/Comp	1 Poor	2 Good	2 REHABILITATI
2 Poor	1 Poor	1 Poor	2 Local	2 Chip/Comp	2 Good	1 Poor	2 REHABILITATI
2 Poor	1 Poor	1 Poor	2 Local	2 Chip/Comp	2 Good	2 Good	2 REHABILITATI
2 Poor	1 Poor	2 Good	1 Arte/Coll	1 Bituminou	1 Poor	1 Poor	1 RECONST.OR R
2 Poor	1 Poor	2 Good	1 Arte/Coll	1 Bituminou	1 Poor	2 Good	1 RECONST.OR R
2 Poor	1 Poor	2 Good	1 Arte/Coll	1 Bituminou	2 Good	1 Poor	1 RECONST.OR R
2 Poor	1 Poor	2 Good	1 Arte/Coll	1 Bituminou	2 Good	2 Good	1 RECONST.OR R
2 Poor	1 Poor	2 Good	1 Arte/Coll	2 Chip/Comp	1 Poor	1 Poor	1 RECONST.OR R
2 Poor	1 Poor	2 Good	1 Arte/Coll	2 Chip/Comp	1 Poor	2 Good	1 RECONST.OR R
2 Poor	1 Poor	2 Good	1 Arte/Coll	2 Chip/Comp	2 Good	1 Poor	1 RECONST.OR R
2 Poor	1 Poor	2 Good	1 Arte/Coll	2 Chip/Comp	2 Good	2 Good	1 RECONST.OR R
2 Poor	1 Poor	2 Good	2 Local	1 Bituminou	1 Poor	1 Poor	2 REHABILITATI
2 Poor	1 Poor	2 Good	2 Local	1 Bituminou	1 Poor	2 Good	2 REHABILITATI
2 Poor	1 Poor	2 Good	2 Local	1 Bituminou	2 Good	1 Poor	2 REHABILITATI
2 Poor	1 Poor	2 Good	2 Local	1 Bituminou	2 Good	2 Good	2 REHABILITATI
2 Poor	1 Poor	2 Good	2 Local	2 Chip/Comp	1 Poor	1 Poor	2 REHABILITATI
2 Poor	1 Poor	2 Good	2 Local	2 Chip/Comp	1 Poor	2 Good	2 REHABILITATI
2 Poor	1 Poor	2 Good	2 Local	2 Chip/Comp	2 Good	1 Poor	2 REHABILITATI
2 Poor	1 Poor	2 Good	2 Local	2 Chip/Comp	2 Good	2 Good	2 REHABILITATI
2 Poor	2 Good	1 Poor	1 Arte/Coll	1 Bituminou	1 Poor	1 Poor	2 REHABILITATI
2 Poor	2 Good	1 Poor	1 Arte/Coll	1 Bituminou	1 Poor	2 Good	2 REHABILITATI
2 Poor	2 Good	1 Poor	1 Arte/Coll	1 Bituminou	2 Good	1 Poor	2 REHABILITATI
2 Poor	2 Good	1 Poor	1 Arte/Coll	1 Bituminou	2 Good	2 Good	2 REHABILITATI
2 Poor	2 Good	1 Poor	1 Arte/Coll	2 Chip/Comp	1 Poor	1 Poor	2 REHABILITATI
2 Poor	2 Good	1 Poor	1 Arte/Coll	2 Chip/Comp	1 Poor	2 Good	2 REHABILITATI
2 Poor	2 Good	1 Poor	1 Arte/Coll	2 Chip/Comp	2 Good	1 Poor	2 REHABILITATI
2 Poor	2 Good	1 Poor	1 Arte/Coll	2 Chip/Comp	2 Good	2 Good	2 REHABILITATI
2 Poor	2 Good	1 Poor	2 Local	1 Bituminou	1 Poor	1 Poor	3 PREVENTITIVE
2 Poor	2 Good	1 Poor	2 Local	1 Bituminou	1 Poor	2 Good	3 PREVENTITIVE
2 Poor	2 Good	1 Poor	2 Local	1 Bituminou	2 Good	1 Poor	3 PREVENTITIVE
2 Poor	2 Good	1 Poor	2 Local	1 Bituminou	2 Good	2 Good	3 PREVENTITIVE
2 Poor	2 Good	1 Poor	2 Local	2 Chip/Comp	1 Poor	1 Poor	3 PREVENTITIVE

PCI	BASE INDEX	CURB REVEAL	FUNCTIONAL CLASS	PAVEMENT TYPE	UTIL INDEX	DRAIN INDEX	REPAIR CODE
2 Poor	2 Good	1 Poor	2 Local	2 Chip/Comp	1 Poor	2 Good	3 PREVENTITIVE
2 Poor	2 Good	1 Poor	2 Local	2 Chip/Comp	2 Good	1 Poor	3 PREVENTITIVE
2 Poor	2 Good	1 Poor	2 Local	2 Chip/Comp	2 Good	2 Good	3 PREVENTITIVE
2 Poor	2 Good	2 Good	1 Arte/Coll	1 Bituminou	1 Poor	1 Poor	2 REHABILITATI
2 Poor	2 Good	2 Good	1 Arte/Coll	1 Bituminou	1 Poor	2 Good	2 REHABILITATI
2 Poor	2 Good	2 Good	1 Arte/Coll	1 Bituminou	2 Good	1 Poor	2 REHABILITATI
2 Poor	2 Good	2 Good	1 Arte/Coll	1 Bituminou	2 Good	2 Good	2 REHABILITATI
2 Poor	2 Good	2 Good	1 Arte/Coll	2 Chip/Comp	1 Poor	1 Poor	2 REHABILITATI
2 Poor	2 Good	2 Good	1 Arte/Coll	2 Chip/Comp	1 Poor	2 Good	2 REHABILITATI
2 Poor	2 Good	2 Good	1 Arte/Coll	2 Chip/Comp	2 Good	1 Poor	2 REHABILITATI
2 Poor	2 Good	2 Good	1 Arte/Coll	2 Chip/Comp	2 Good	2 Good	2 REHABILITATI
2 Poor	2 Good	2 Good	2 Local	1 Bituminou	1 Poor	1 Poor	3 PREVENTITIVE
2 Poor	2 Good	2 Good	2 Local	1 Bituminou	1 Poor	2 Good	3 PREVENTITIVE
2 Poor	2 Good	2 Good	2 Local	1 Bituminou	2 Good	1 Poor	3 PREVENTITIVE
2 Poor	2 Good	2 Good	2 Local	1 Bituminou	2 Good	2 Good	3 PREVENTITIVE
2 Poor	2 Good	2 Good	2 Local	2 Chip/Comp	1 Poor	1 Poor	3 PREVENTITIVE
2 Poor	2 Good	2 Good	2 Local	2 Chip/Comp	1 Poor	2 Good	3 PREVENTITIVE
2 Poor	2 Good	2 Good	2 Local	2 Chip/Comp	2 Good	1 Poor	3 PREVENTITIVE
2 Poor	2 Good	2 Good	2 Local	2 Chip/Comp	2 Good	2 Good	3 PREVENTITIVE
3 Fair	1 Poor	1 Poor	1 Arte/Coll	1 Bituminou	1 Poor	1 Poor	2 REHABILITATI
3 Fair	1 Poor	1 Poor	1 Arte/Coll	1 Bituminou	1 Poor	2 Good	2 REHABILITATI
3 Fair	1 Poor	1 Poor	1 Arte/Coll	1 Bituminou	2 Good	1 Poor	2 REHABILITATI
3 Fair	1 Poor	1 Poor	1 Arte/Coll	1 Bituminou	2 Good	2 Good	2 REHABILITATI
3 Fair	1 Poor	1 Poor	1 Arte/Coll	2 Chip/Comp	1 Poor	1 Poor	2 REHABILITATI
3 Fair	1 Poor	1 Poor	1 Arte/Coll	2 Chip/Comp	1 Poor	2 Good	2 REHABILITATI
3 Fair	1 Poor	1 Poor	1 Arte/Coll	2 Chip/Comp	2 Good	1 Poor	2 REHABILITATI
3 Fair	1 Poor	1 Poor	1 Arte/Coll	2 Chip/Comp	2 Good	2 Good	2 REHABILITATI
3 Fair	1 Poor	1 Poor	2 Local	1 Bituminou	1 Poor	1 Poor	3 PREVENTITIVE
3 Fair	1 Poor	1 Poor	2 Local	1 Bituminou	1 Poor	2 Good	3 PREVENTITIVE
3 Fair	1 Poor	1 Poor	2 Local	1 Bituminou	2 Good	1 Poor	3 PREVENTITIVE
3 Fair	1 Poor	1 Poor	2 Local	1 Bituminou	2 Good	2 Good	3 PREVENTITIVE
3 Fair	1 Poor	1 Poor	2 Local	2 Chip/Comp	1 Poor	1 Poor	3 PREVENTITIVE
3 Fair	1 Poor	1 Poor	2 Local	2 Chip/Comp	1 Poor	2 Good	3 PREVENTITIVE
3 Fair	1 Poor	1 Poor	2 Local	2 Chip/Comp	2 Good	1 Poor	3 PREVENTITIVE
3 Fair	1 Poor	1 Poor	2 Local	2 Chip/Comp	2 Good	2 Good	3 PREVENTITIVE
3 Fair	1 Poor	2 Good	1 Arte/Coll	1 Bituminou	1 Poor	1 Poor	2 REHABILITATI
3 Fair	1 Poor	2 Good	1 Arte/Coll	1 Bituminou	1 Poor	2 Good	3 PREVENTITIVE
3 Fair	1 Poor	2 Good	1 Arte/Coll	1 Bituminou	2 Good	1 Poor	3 PREVENTITIVE
3 Fair	1 Poor	2 Good	1 Arte/Coll	1 Bituminou	2 Good	2 Good	3 PREVENTITIVE
3 Fair	1 Poor	2 Good	1 Arte/Coll	2 Chip/Comp	1 Poor	1 Poor	2 REHABILITATI
3 Fair	1 Poor	2 Good	1 Arte/Coll	2 Chip/Comp	1 Poor	2 Good	3 PREVENTITIVE
3 Fair	1 Poor	2 Good	1 Arte/Coll	2 Chip/Comp	2 Good	1 Poor	3 PREVENTITIVE
3 Fair	1 Poor	2 Good	1 Arte/Coll	2 Chip/Comp	2 Good	2 Good	3 PREVENTITIVE
3 Fair	1 Poor	2 Good	2 Local	1 Bituminou	1 Poor	1 Poor	3 PREVENTITIVE
3 Fair	1 Poor	2 Good	2 Local	1 Bituminou	1 Poor	2 Good	3 PREVENTITIVE
3 Fair	1 Poor	2 Good	2 Local	1 Bituminou	2 Good	1 Poor	3 PREVENTITIVE
3 Fair	1 Poor	2 Good	2 Local	1 Bituminou	2 Good	2 Good	3 PREVENTITIVE
3 Fair	1 Poor	2 Good	2 Local	2 Chip/Comp	1 Poor	1 Poor	3 PREVENTITIVE
3 Fair	1 Poor	2 Good	2 Local	2 Chip/Comp	1 Poor	2 Good	3 PREVENTITIVE
3 Fair	1 Poor	2 Good	2 Local	2 Chip/Comp	2 Good	1 Poor	3 PREVENTITIVE
3 Fair	1 Poor	2 Good	2 Local	2 Chip/Comp	2 Good	2 Good	3 PREVENTITIVE
3 Fair	2 Good	1 Poor	1 Arte/Coll	1 Bituminou	1 Poor	1 Poor	2 REHABILITATI
3 Fair	2 Good	1 Poor	1 Arte/Coll	1 Bituminou	1 Poor	2 Good	3 PREVENTITIVE
3 Fair	2 Good	1 Poor	1 Arte/Coll	1 Bituminou	2 Good	1 Poor	3 PREVENTITIVE
3 Fair	2 Good	1 Poor	1 Arte/Coll	1 Bituminou	2 Good	2 Good	3 PREVENTITIVE
3 Fair	2 Good	1 Poor	1 Arte/Coll	2 Chip/Comp	1 Poor	1 Poor	2 REHABILITATI
3 Fair	2 Good	1 Poor	1 Arte/Coll	2 Chip/Comp	1 Poor	2 Good	3 PREVENTITIVE

PCI	BASE INDEX	CURB REVEAL	FUNCTIONAL CLASS	PAVEMENT TYPE	UTIL INDEX	DRAIN INDEX	REPAIR CODE
3 Fair	2 Good	1 Poor	1 Arte/Coll	2 Chip/Comp	2 Good	1 Poor	3 PREVENTITIVE
3 Fair	2 Good	1 Poor	1 Arte/Coll	2 Chip/Comp	2 Good	2 Good	3 PREVENTITIVE
3 Fair	2 Good	1 Poor	2 Local	1 Bituminou	1 Poor	1 Poor	4 ROUTINE MAIN
3 Fair	2 Good	1 Poor	2 Local	1 Bituminou	1 Poor	2 Good	4 ROUTINE MAIN
3 Fair	2 Good	1 Poor	2 Local	1 Bituminou	2 Good	1 Poor	4 ROUTINE MAIN
3 Fair	2 Good	1 Poor	2 Local	1 Bituminou	2 Good	2 Good	4 ROUTINE MAIN
3 Fair	2 Good	1 Poor	2 Local	2 Chip/Comp	1 Poor	1 Poor	4 ROUTINE MAIN
3 Fair	2 Good	1 Poor	2 Local	2 Chip/Comp	1 Poor	2 Good	4 ROUTINE MAIN
3 Fair	2 Good	1 Poor	2 Local	2 Chip/Comp	2 Good	1 Poor	4 ROUTINE MAIN
3 Fair	2 Good	1 Poor	2 Local	2 Chip/Comp	2 Good	2 Good	4 ROUTINE MAIN
3 Fair	2 Good	2 Good	1 Arte/Coll	1 Bituminou	1 Poor	1 Poor	2 REHABILITATI
3 Fair	2 Good	2 Good	1 Arte/Coll	1 Bituminou	1 Poor	2 Good	3 PREVENTITIVE
3 Fair	2 Good	2 Good	1 Arte/Coll	1 Bituminou	2 Good	1 Poor	3 PREVENTITIVE
3 Fair	2 Good	2 Good	1 Arte/Coll	1 Bituminou	2 Good	2 Good	3 PREVENTITIVE
3 Fair	2 Good	2 Good	1 Arte/Coll	2 Chip/Comp	1 Poor	1 Poor	2 REHABILITATI
3 Fair	2 Good	2 Good	1 Arte/Coll	2 Chip/Comp	1 Poor	2 Good	3 PREVENTITIVE
3 Fair	2 Good	2 Good	1 Arte/Coll	2 Chip/Comp	2 Good	1 Poor	3 PREVENTITIVE
3 Fair	2 Good	2 Good	1 Arte/Coll	2 Chip/Comp	2 Good	2 Good	3 PREVENTITIVE
3 Fair	2 Good	2 Good	2 Local	1 Bituminou	1 Poor	1 Poor	4 ROUTINE MAIN
3 Fair	2 Good	2 Good	2 Local	1 Bituminou	1 Poor	2 Good	4 ROUTINE MAIN
3 Fair	2 Good	2 Good	2 Local	1 Bituminou	2 Good	1 Poor	4 ROUTINE MAIN
3 Fair	2 Good	2 Good	2 Local	1 Bituminou	2 Good	2 Good	4 ROUTINE MAIN
3 Fair	2 Good	2 Good	2 Local	2 Chip/Comp	1 Poor	1 Poor	4 ROUTINE MAIN
3 Fair	2 Good	2 Good	2 Local	2 Chip/Comp	1 Poor	2 Good	4 ROUTINE MAIN
3 Fair	2 Good	2 Good	2 Local	2 Chip/Comp	2 Good	1 Poor	4 ROUTINE MAIN
3 Fair	2 Good	2 Good	2 Local	2 Chip/Comp	2 Good	2 Good	4 ROUTINE MAIN
4 Good	1 Poor	1 Poor	1 Arte/Coll	1 Bituminou	1 Poor	1 Poor	3 PREVENTITIVE
4 Good	1 Poor	1 Poor	1 Arte/Coll	1 Bituminou	1 Poor	2 Good	3 PREVENTITIVE
4 Good	1 Poor	1 Poor	1 Arte/Coll	1 Bituminou	2 Good	1 Poor	3 PREVENTITIVE
4 Good	1 Poor	1 Poor	1 Arte/Coll	1 Bituminou	2 Good	2 Good	3 PREVENTITIVE
4 Good	1 Poor	1 Poor	1 Arte/Coll	2 Chip/Comp	1 Poor	1 Poor	3 PREVENTITIVE
4 Good	1 Poor	1 Poor	1 Arte/Coll	2 Chip/Comp	1 Poor	2 Good	3 PREVENTITIVE
4 Good	1 Poor	1 Poor	1 Arte/Coll	2 Chip/Comp	2 Good	1 Poor	3 PREVENTITIVE
4 Good	1 Poor	1 Poor	1 Arte/Coll	2 Chip/Comp	2 Good	2 Good	3 PREVENTITIVE
4 Good	1 Poor	1 Poor	2 Local	1 Bituminou	1 Poor	1 Poor	4 ROUTINE MAIN
4 Good	1 Poor	1 Poor	2 Local	1 Bituminou	1 Poor	2 Good	4 ROUTINE MAIN
4 Good	1 Poor	1 Poor	2 Local	1 Bituminou	2 Good	1 Poor	4 ROUTINE MAIN
4 Good	1 Poor	1 Poor	2 Local	1 Bituminou	2 Good	2 Good	4 ROUTINE MAIN
4 Good	1 Poor	1 Poor	2 Local	2 Chip/Comp	1 Poor	1 Poor	4 ROUTINE MAIN
4 Good	1 Poor	1 Poor	2 Local	2 Chip/Comp	1 Poor	2 Good	4 ROUTINE MAIN
4 Good	1 Poor	1 Poor	2 Local	2 Chip/Comp	2 Good	1 Poor	4 ROUTINE MAIN
4 Good	1 Poor	1 Poor	2 Local	2 Chip/Comp	2 Good	2 Good	4 ROUTINE MAIN
4 Good	1 Poor	2 Good	1 Arte/Coll	1 Bituminou	1 Poor	1 Poor	3 PREVENTITIVE
4 Good	1 Poor	2 Good	1 Arte/Coll	1 Bituminou	1 Poor	2 Good	3 PREVENTITIVE
4 Good	1 Poor	2 Good	1 Arte/Coll	1 Bituminou	2 Good	1 Poor	3 PREVENTITIVE
4 Good	1 Poor	2 Good	1 Arte/Coll	1 Bituminou	2 Good	2 Good	3 PREVENTITIVE
4 Good	1 Poor	2 Good	1 Arte/Coll	2 Chip/Comp	1 Poor	1 Poor	3 PREVENTITIVE
4 Good	1 Poor	2 Good	1 Arte/Coll	2 Chip/Comp	1 Poor	2 Good	3 PREVENTITIVE
4 Good	1 Poor	2 Good	1 Arte/Coll	2 Chip/Comp	2 Good	1 Poor	3 PREVENTITIVE
4 Good	1 Poor	2 Good	1 Arte/Coll	2 Chip/Comp	2 Good	2 Good	3 PREVENTITIVE
4 Good	1 Poor	2 Good	2 Local	1 Bituminou	1 Poor	1 Poor	4 ROUTINE MAIN
4 Good	1 Poor	2 Good	2 Local	1 Bituminou	1 Poor	2 Good	4 ROUTINE MAIN
4 Good	1 Poor	2 Good	2 Local	1 Bituminou	2 Good	1 Poor	4 ROUTINE MAIN
4 Good	1 Poor	2 Good	2 Local	1 Bituminou	2 Good	2 Good	4 ROUTINE MAIN
4 Good	1 Poor	2 Good	2 Local	2 Chip/Comp	1 Poor	1 Poor	4 ROUTINE MAIN
4 Good	1 Poor	2 Good	2 Local	2 Chip/Comp	1 Poor	2 Good	4 ROUTINE MAIN
4 Good	1 Poor	2 Good	2 Local	2 Chip/Comp	2 Good	1 Poor	4 ROUTINE MAIN

PCI	BASE INDEX	CURB REVEAL	FUNCTIONAL CLASS	PAVEMENT TYPE	UTIL INDEX	DRAIN INDEX	REPAIR CODE
4 Good	1 Poor	2 Good	2 Local	2 Chip/Comp	2 Good	2 Good	4 ROUTINE MAIN
4 Good	2 Good	1 Poor	1 Arte/Coll	1 Bituminou	1 Poor	1 Poor	3 PREVENTITIVE
4 Good	2 Good	1 Poor	1 Arte/Coll	1 Bituminou	1 Poor	2 Good	3 PREVENTITIVE
4 Good	2 Good	1 Poor	1 Arte/Coll	1 Bituminou	2 Good	1 Poor	3 PREVENTITIVE
4 Good	2 Good	1 Poor	1 Arte/Coll	1 Bituminou	2 Good	2 Good	4 ROUTINE MAIN
4 Good	2 Good	1 Poor	1 Arte/Coll	2 Chip/Comp	1 Poor	1 Poor	3 PREVENTITIVE
4 Good	2 Good	1 Poor	1 Arte/Coll	2 Chip/Comp	1 Poor	2 Good	3 PREVENTITIVE
4 Good	2 Good	1 Poor	1 Arte/Coll	2 Chip/Comp	2 Good	1 Poor	3 PREVENTITIVE
4 Good	2 Good	1 Poor	1 Arte/Coll	2 Chip/Comp	2 Good	2 Good	4 ROUTINE MAIN
4 Good	2 Good	1 Poor	2 Local	1 Bituminou	1 Poor	1 Poor	4 ROUTINE MAIN
4 Good	2 Good	1 Poor	2 Local	1 Bituminou	1 Poor	2 Good	4 ROUTINE MAIN
4 Good	2 Good	1 Poor	2 Local	1 Bituminou	2 Good	1 Poor	4 ROUTINE MAIN
4 Good	2 Good	1 Poor	2 Local	1 Bituminou	2 Good	2 Good	4 ROUTINE MAIN
4 Good	2 Good	1 Poor	2 Local	2 Chip/Comp	1 Poor	1 Poor	4 ROUTINE MAIN
4 Good	2 Good	1 Poor	2 Local	2 Chip/Comp	1 Poor	2 Good	4 ROUTINE MAIN
4 Good	2 Good	1 Poor	2 Local	2 Chip/Comp	2 Good	1 Poor	4 ROUTINE MAIN
4 Good	2 Good	1 Poor	2 Local	2 Chip/Comp	2 Good	2 Good	4 ROUTINE MAIN
4 Good	2 Good	2 Good	1 Arte/Coll	1 Bituminou	1 Poor	1 Poor	3 PREVENTITIVE
4 Good	2 Good	2 Good	1 Arte/Coll	1 Bituminou	1 Poor	2 Good	3 PREVENTITIVE
4 Good	2 Good	2 Good	1 Arte/Coll	1 Bituminou	2 Good	1 Poor	3 PREVENTITIVE
4 Good	2 Good	2 Good	1 Arte/Coll	1 Bituminou	2 Good	2 Good	4 ROUTINE MAIN
4 Good	2 Good	2 Good	1 Arte/Coll	2 Chip/Comp	1 Poor	1 Poor	3 PREVENTITIVE
4 Good	2 Good	2 Good	1 Arte/Coll	2 Chip/Comp	1 Poor	2 Good	3 PREVENTITIVE
4 Good	2 Good	2 Good	1 Arte/Coll	2 Chip/Comp	2 Good	1 Poor	3 PREVENTITIVE
4 Good	2 Good	2 Good	1 Arte/Coll	2 Chip/Comp	2 Good	2 Good	4 ROUTINE MAIN
4 Good	2 Good	2 Good	2 Local	1 Bituminou	1 Poor	1 Poor	4 ROUTINE MAIN
4 Good	2 Good	2 Good	2 Local	1 Bituminou	1 Poor	2 Good	4 ROUTINE MAIN
4 Good	2 Good	2 Good	2 Local	1 Bituminou	2 Good	1 Poor	4 ROUTINE MAIN
4 Good	2 Good	2 Good	2 Local	1 Bituminou	2 Good	2 Good	4 ROUTINE MAIN
4 Good	2 Good	2 Good	2 Local	2 Chip/Comp	1 Poor	1 Poor	4 ROUTINE MAIN
4 Good	2 Good	2 Good	2 Local	2 Chip/Comp	1 Poor	2 Good	4 ROUTINE MAIN
4 Good	2 Good	2 Good	2 Local	2 Chip/Comp	2 Good	1 Poor	4 ROUTINE MAIN
4 Good	2 Good	2 Good	2 Local	2 Chip/Comp	2 Good	2 Good	4 ROUTINE MAIN
5 Best	1 Poor	1 Poor	1 Arte/Coll	1 Bituminou	1 Poor	1 Poor	4 ROUTINE MAIN
5 Best	1 Poor	1 Poor	1 Arte/Coll	1 Bituminou	1 Poor	2 Good	4 ROUTINE MAIN
5 Best	1 Poor	1 Poor	1 Arte/Coll	1 Bituminou	2 Good	1 Poor	4 ROUTINE MAIN
5 Best	1 Poor	1 Poor	1 Arte/Coll	1 Bituminou	2 Good	2 Good	4 ROUTINE MAIN
5 Best	1 Poor	1 Poor	1 Arte/Coll	2 Chip/Comp	1 Poor	1 Poor	4 ROUTINE MAIN
5 Best	1 Poor	1 Poor	1 Arte/Coll	2 Chip/Comp	1 Poor	2 Good	4 ROUTINE MAIN
5 Best	1 Poor	1 Poor	1 Arte/Coll	2 Chip/Comp	2 Good	1 Poor	4 ROUTINE MAIN
5 Best	1 Poor	1 Poor	1 Arte/Coll	2 Chip/Comp	2 Good	2 Good	4 ROUTINE MAIN
5 Best	1 Poor	1 Poor	2 Local	1 Bituminou	1 Poor	1 Poor	5 NO ACTION
5 Best	1 Poor	1 Poor	2 Local	1 Bituminou	1 Poor	2 Good	5 NO ACTION
5 Best	1 Poor	1 Poor	2 Local	1 Bituminou	2 Good	1 Poor	5 NO ACTION
5 Best	1 Poor	1 Poor	2 Local	1 Bituminou	2 Good	2 Good	5 NO ACTION
5 Best	1 Poor	1 Poor	2 Local	2 Chip/Comp	1 Poor	1 Poor	5 NO ACTION
5 Best	1 Poor	1 Poor	2 Local	2 Chip/Comp	1 Poor	2 Good	5 NO ACTION
5 Best	1 Poor	1 Poor	2 Local	2 Chip/Comp	2 Good	1 Poor	5 NO ACTION
5 Best	1 Poor	1 Poor	2 Local	2 Chip/Comp	2 Good	2 Good	5 NO ACTION
5 Best	1 Poor	2 Good	1 Arte/Coll	1 Bituminou	1 Poor	1 Poor	4 ROUTINE MAIN
5 Best	1 Poor	2 Good	1 Arte/Coll	1 Bituminou	1 Poor	2 Good	5 NO ACTION
5 Best	1 Poor	2 Good	1 Arte/Coll	1 Bituminou	2 Good	1 Poor	4 ROUTINE MAIN
5 Best	1 Poor	2 Good	1 Arte/Coll	1 Bituminou	2 Good	2 Good	5 NO ACTION
5 Best	1 Poor	2 Good	1 Arte/Coll	2 Chip/Comp	1 Poor	1 Poor	4 ROUTINE MAIN
5 Best	1 Poor	2 Good	1 Arte/Coll	2 Chip/Comp	1 Poor	2 Good	5 NO ACTION
5 Best	1 Poor	2 Good	1 Arte/Coll	2 Chip/Comp	2 Good	1 Poor	4 ROUTINE MAIN
5 Best	1 Poor	2 Good	1 Arte/Coll	2 Chip/Comp	2 Good	2 Good	5 NO ACTION

PCI	BASE INDEX	CURB REVEAL	FUNCTIONAL CLASS	PAVEMENT TYPE	UTIL INDEX	DRAIN INDEX	REPAIR CODE
5 Best	1 Poor	2 Good	2 Local	1 Bituminou	1 Poor	1 Poor	5 NO ACTION
5 Best	1 Poor	2 Good	2 Local	1 Bituminou	1 Poor	2 Good	5 NO ACTION
5 Best	1 Poor	2 Good	2 Local	1 Bituminou	2 Good	1 Poor	5 NO ACTION
5 Best	1 Poor	2 Good	2 Local	1 Bituminou	2 Good	2 Good	5 NO ACTION
5 Best	1 Poor	2 Good	2 Local	2 Chip/Comp	1 Poor	1 Poor	5 NO ACTION
5 Best	1 Poor	2 Good	2 Local	2 Chip/Comp	1 Poor	2 Good	5 NO ACTION
5 Best	1 Poor	2 Good	2 Local	2 Chip/Comp	2 Good	1 Poor	5 NO ACTION
5 Best	1 Poor	2 Good	2 Local	2 Chip/Comp	2 Good	2 Good	5 NO ACTION
5 Best	2 Good	1 Poor	1 Arte/Coll	1 Bituminou	1 Poor	1 Poor	5 NO ACTION
5 Best	2 Good	1 Poor	1 Arte/Coll	1 Bituminou	1 Poor	2 Good	5 NO ACTION
5 Best	2 Good	1 Poor	1 Arte/Coll	1 Bituminou	2 Good	1 Poor	5 NO ACTION
5 Best	2 Good	1 Poor	1 Arte/Coll	1 Bituminou	2 Good	2 Good	5 NO ACTION
5 Best	2 Good	1 Poor	1 Arte/Coll	2 Chip/Comp	1 Poor	1 Poor	5 NO ACTION
5 Best	2 Good	1 Poor	1 Arte/Coll	2 Chip/Comp	1 Poor	2 Good	5 NO ACTION
5 Best	2 Good	1 Poor	1 Arte/Coll	2 Chip/Comp	2 Good	1 Poor	5 NO ACTION
5 Best	2 Good	1 Poor	1 Arte/Coll	2 Chip/Comp	2 Good	2 Good	5 NO ACTION
5 Best	2 Good	1 Poor	2 Local	1 Bituminou	1 Poor	1 Poor	5 NO ACTION
5 Best	2 Good	1 Poor	2 Local	1 Bituminou	1 Poor	2 Good	5 NO ACTION
5 Best	2 Good	1 Poor	2 Local	1 Bituminou	2 Good	1 Poor	5 NO ACTION
5 Best	2 Good	1 Poor	2 Local	1 Bituminou	2 Good	2 Good	5 NO ACTION
5 Best	2 Good	1 Poor	2 Local	2 Chip/Comp	1 Poor	1 Poor	5 NO ACTION
5 Best	2 Good	1 Poor	2 Local	2 Chip/Comp	1 Poor	2 Good	5 NO ACTION
5 Best	2 Good	1 Poor	2 Local	2 Chip/Comp	2 Good	1 Poor	5 NO ACTION
5 Best	2 Good	1 Poor	2 Local	2 Chip/Comp	2 Good	2 Good	5 NO ACTION
5 Best	2 Good	2 Good	1 Arte/Coll	1 Bituminou	1 Poor	1 Poor	5 NO ACTION
5 Best	2 Good	2 Good	1 Arte/Coll	1 Bituminou	1 Poor	2 Good	5 NO ACTION
5 Best	2 Good	2 Good	1 Arte/Coll	1 Bituminou	2 Good	1 Poor	5 NO ACTION
5 Best	2 Good	2 Good	1 Arte/Coll	1 Bituminou	2 Good	2 Good	5 NO ACTION
5 Best	2 Good	2 Good	1 Arte/Coll	2 Chip/Comp	1 Poor	1 Poor	5 NO ACTION
5 Best	2 Good	2 Good	1 Arte/Coll	2 Chip/Comp	1 Poor	2 Good	5 NO ACTION
5 Best	2 Good	2 Good	1 Arte/Coll	2 Chip/Comp	2 Good	1 Poor	5 NO ACTION
5 Best	2 Good	2 Good	1 Arte/Coll	2 Chip/Comp	2 Good	2 Good	5 NO ACTION
5 Best	2 Good	2 Good	2 Local	1 Bituminou	1 Poor	1 Poor	5 NO ACTION
5 Best	2 Good	2 Good	2 Local	1 Bituminou	1 Poor	2 Good	5 NO ACTION
5 Best	2 Good	2 Good	2 Local	1 Bituminou	2 Good	1 Poor	5 NO ACTION
5 Best	2 Good	2 Good	2 Local	1 Bituminou	2 Good	2 Good	5 NO ACTION
5 Best	2 Good	2 Good	2 Local	2 Chip/Comp	1 Poor	1 Poor	5 NO ACTION
5 Best	2 Good	2 Good	2 Local	2 Chip/Comp	1 Poor	2 Good	5 NO ACTION
5 Best	2 Good	2 Good	2 Local	2 Chip/Comp	2 Good	1 Poor	5 NO ACTION
5 Best	2 Good	2 Good	2 Local	2 Chip/Comp	2 Good	2 Good	5 NO ACTION

APPENDIX B

Existing Conditions

Roadway Listing by Street Name and Section
Roadway Listing by PCI Ascending
Roadway Listing by Benefit Value Descending
Graph of PCI Distribution
Graph of Miles by Repair Category
Graph of Total Needs by Repair Category

SOUTHWICK
Asphalt Module Summary Listing
ALL records
Sorted By: Street Name & Section
11/03/92

Street Name	Sect. ID	Length (ft)	Curb Reveal	PCI	Repair	Current Cost	Benefit Value	Survey Date
ARCADIA LANE	1	780	0.0	61	4	1768	53	10/09/91
BERKSHIRE AVENUE	1	2927	0.0	99	5	0	0	12/13/91
BERKSHIRE AVENUE	2	2416	0.0	95	5	0	0	12/13/91
BERKSHIRE AVENUE	3	4287	0.0	85	4	14171	104	12/13/91
BIRCHWOOD ROAD	1	2058	0.0	95	5	0	0	02/04/92
BONNEY VIEW ROAD	1	955	6.0	99	5	0	0	10/11/91
BUCKINGHAM ROAD	1	2216	0.0	55	3	16842	22	12/16/91
BUGBEE ROAD	1	1220	0.0	100	5	0	0	09/18/91
BUGBEE ROAD	2	1750	0.0	78	3	15517	53	09/18/91
CEDER ROAD	1	535	0.0	99	5	0	0	10/11/91
COES HILL ROAD	1	2917	0.0	95	5	0	0	10/09/91
COES HILL ROAD	2	2886	0.0	84	4	6542	38	10/09/91
COES HILL ROAD	3	2275	0.0	70	4	5157	46	10/09/91
CONCORD ROAD	1	1033	0.0	95	5	0	0	02/04/92
CONGAMOND ROAD	1	3838	0.0	70	2	100748	179	12/13/91
CONGAMOND ROAD	2	2714	0.0	73	3	23205	175	12/13/91
CRESENT CIRCLE	1	1455	0.0	90	5	0	0	10/11/91
DAVIS ROAD	1	5900	0.0	76	4	12259	46	09/18/91
DEPOT ST	1	2478	6.0	79	3	21972	130	10/11/91
DEWITT CIRCLE	1	570	8.0	100	5	0	0	12/16/91
EVERGREEN ST	1	357	0.0	44	2	9024	25	10/11/91
FALMOUTH ROAD	1	912	8.0	80	4	2584	32	02/04/92
FEEDING HILLS ROAD	1	2980	0.0	83	3	31141	225	12/16/91
FEEDING HILLS ROAD	2	8430	0.0	77	3	82755	258	12/16/91
FEEDING HILLS ROAD	3	4991	0.0	77	3	50575	250	12/16/91
FENTON DRIVE	1	672	0.0	56	3	5107	21	10/09/91
FERNWOOD ROAD	1	2350	0.0	95	5	0	0	02/04/92
FRED JACKSON ROAD	1	2165	0.0	41	2	50517	29	10/09/91
FRED JACKSON ROAD	2	2920	0.0	51	3	22192	24	10/09/91
FRED JACKSON ROAD	3	1075	0.0	62	4	2437	52	10/09/91
FRED JACKSON ROAD	4	1491	0.0	100	5	0	0	10/09/91
FRED JACKSON ROAD	5	2144	0.0	93	5	0	0	10/09/91
GARGIN TERR	1	1741	0.0	89	4	4111	35	12/16/91
GEORGE LOOMIS ROAD	1	778	0.0	66	4	1617	53	10/09/91
GEORGE LOOMIS ROAD	2	2400	0.0	42	2	51333	30	10/09/91
GLORIA DRIVE	1	442	0.0	90	5	0	0	12/16/91
GRANAUDOR CIRCLE	1	2565	8.0	83	4	6783	33	12/13/91
GRANVILLE ROAD	1	4321	6.0	95	5	0	0	10/09/91
GRANVILLE ROAD	2	8310	6.0	100	5	0	0	10/09/91
GRANVILLE ROAD	3	6500	5.0	100	5	0	0	10/09/91
GRANVILLE ROAD	4	2510	0.0	83	3	23845	104	10/09/91
GREAT BROOK DRIVE	1	168	4.0	100	5	0	0	12/16/91
GREAT BROOK LANE	1	365	4.0	100	5	0	0	12/16/91
HAM HILL ROAD	1	467	0.0	56	3	3549	21	10/09/91
HAM HILL ROAD	2	838	0.0	51	3	6369	24	10/09/91
HASTINGS ROAD	1	430	0.0	88	4	812	44	10/09/91

SOUTHWICK
Asphalt Module Summary Listing
ALL records
Sorted By: PCI - Ascending
11/03/92

Street Name	Sect. ID	Length (ft)	Curb Reveal	PCI	Repair	Current Cost	Benefit Value	Survey Date
VINING HILL ROAD	3	2835	0.0	36	1	189000	61	10/10/91
VINING HILL ROAD	4	4235	0.0	39	1	282333	56	10/10/91
FRED JACKSON ROAD	1	2165	0.0	41	2	50517	29	10/09/91
GEORGE LOOMIS ROAD	2	2400	0.0	42	2	51333	30	10/09/91
SUNNY SIDE ROAD	1	5757	0.0	42	2	123136	30	09/18/91
SAM WEST ROAD	2	1081	0.0	42	1	72067	13	12/16/91
SAM WEST ROAD	1	1111	0.0	43	1	74067	13	12/16/91
EVERGREEN ST	1	357	0.0	44	2	9024	25	10/11/91
INDUSTRIAL ROAD	1	1505	0.0	44	1	108694	11	09/18/91
HUDSON DRIVE	1	2133	0.0	46	1	177750	10	12/16/91
WILL PALMER ROAD	1	1920	0.0	50	3	608	576	10/09/91
HAM HILL ROAD	2	838	0.0	51	3	6369	24	10/09/91
SOUTH LONGYARD ROAD	1	4403	0.0	51	1	269072	105	12/13/91
SOUTH LONGYARD ROAD	2	6241	0.0	51	1	381394	105	12/13/91
FRED JACKSON ROAD	2	2920	0.0	51	3	22192	24	10/09/91
SOUTH LOOMIS ROAD	3	2400	0.0	52	1	146667	46	10/10/91
SOUTH LOOMIS ROAD	4	2952	0.0	53	1	180400	45	10/10/91
HILLCREST ST	1	702	0.0	54	4	1459	65	12/16/91
KLAUS ANDERSON ROAD	4	5618	0.0	54	1	374533	15	10/10/91
HILLSIDE ROAD	1	4752	0.0	54	1	316800	10	10/01/91
BUCKINGHAM ROAD	1	2216	0.0	55	3	16842	22	12/16/91
MAPLE ST	1	718	0.0	55	3	4547	26	10/11/91
PT. GROVE ROAD	1	3646	0.0	55	1	273450	97	12/13/91
HILLSIDE ROAD	3	5280	0.0	55	2	123200	21	10/01/91
FENTON DRIVE	1	672	0.0	56	3	5107	21	10/09/91
HAM HILL ROAD	1	467	0.0	56	3	3549	21	10/09/91
PT. GROVE ROAD	2	2249	0.0	56	1	168675	96	12/13/91
POWDER MILL ROAD	1	1290	0.0	56	1	114667	29	12/16/91
HILLSIDE ROAD	2	3696	0.0	56	2	86240	21	10/01/91
SOUTH LONGYARD ROAD	3	5305	0.0	58	1	353667	85	12/13/91
TANNERY ROAD	2	2425	0.0	60	2	56583	78	12/16/91
TANNERY ROAD	3	2718	0.0	60	2	63420	78	12/16/91
ARCADIA LANE	1	780	0.0	61	4	1768	53	10/09/91
SHEEP PASTURE ROAD	2	4379	0.0	61	3	29120	22	12/13/91
LOGIE LANE	1	931	0.0	61	3	6486	21	10/10/91
JOHN MASON ROAD	1	1300	6.0	61	3	9057	21	10/09/91
VINING HILL ROAD	1	4265	0.0	62	2	99517	76	10/10/91
SOUTH LOOMIS ROAD	1	3022	6.0	62	2	94018	57	10/10/91
FRED JACKSON ROAD	3	1075	0.0	62	4	2437	52	10/09/91
SHEEP PASTURE ROAD	1	2644	0.0	63	1	279089	22	12/13/91
TAMMY ROAD	1	900	6.0	63	3	8550	15	10/10/91
WILL PALMER ROAD	2	2830	0.0	65	4	6415	50	10/09/91
NORTH LOOMIS ROAD	1	5527	0.0	65	2	118216	79	10/09/91
MORT VINING HILL RD	2	5280	0.0	66	2	102667	85	10/10/91
GEORGE LOOMIS ROAD	1	778	0.0	66	4	1617	53	10/09/91
NORTH LONGYARD ROAD	2	4869	0.0	66	2	104143	155	12/16/91

Street Name	Sect. ID	Length (ft)	Curb Reveal	PCI	Repair	Current Cost	Benefit Value	Survey Date
SHEEP PASTURE ROAD	3	5997	0.0	67	3	39880	20	12/13/91
CONGAMOND ROAD	1	3838	0.0	70	2	100748	179	12/13/91
COES HILL ROAD	3	2275	0.0	70	4	5157	46	10/09/91
CONGAMOND ROAD	2	2714	0.0	73	3	23205	175	12/13/91
MORT VINING HILL RD	1	1820	0.0	74	3	11527	78	10/10/91
MORT VINING HILL RD	3	4852	0.0	74	3	30729	78	10/10/91
RISINGS CORNER	1	918	0.0	75	3	6977	64	12/13/91
LARO ROAD	1	2403	0.0	76	3	16741	69	12/16/91
TANNERY ROAD	1	2272	0.0	76	3	17267	63	12/16/91
DAVIS ROAD	1	5900	0.0	76	4	12259	46	09/18/91
PINNEY WOOD ROAD	1	2036	0.0	76	4	6153	32	02/04/92
FEEDING HILLS ROAD	2	8430	0.0	77	3	82755	258	12/16/91
FEEDING HILLS ROAD	3	4991	0.0	77	3	50575	250	12/16/91
SOUTH LOOMIS ROAD	2	6110	6.0	78	3	61915	46	10/10/91
BUGBEE ROAD	2	1750	0.0	78	3	15517	53	09/18/91
DEPOT ST	1	2478	6.0	79	3	21972	130	10/11/91
JEFFERY CIRCLE	1	1635	6.0	79	4	4633	33	10/10/91
NORTH LONGYARD ROAD	1	2413	0.0	80	3	16811	131	12/16/91
SHAGG BARK ROAD	1	1273	6.0	80	4	3607	32	12/16/91
REDOAK DRIVE	1	798	6.0	80	4	2261	32	12/16/91
SALEM ROAD	1	935	8.0	80	4	2649	32	02/04/92
FALMOUTH ROAD	1	912	8.0	80	4	2584	32	02/04/92
KLAUS ANDERSON ROAD	2	1945	0.0	82	4	4409	79	10/10/91
NORTH LOOMIS ROAD	2	2135	0.0	82	3	14874	64	10/09/91
VINING HILL ROAD	5	323	0.0	83	3	2864	50	10/10/91
GRANAUDOR CIRCLE	1	2565	8.0	83	4	6783	33	12/13/91
FEEDING HILLS ROAD	1	2980	0.0	83	3	31141	225	12/16/91
NORTH LOOMIS ROAD	3	1517	0.0	83	3	10568	63	10/09/91
GRANVILLE ROAD	4	2510	0.0	83	3	23845	104	10/09/91
COES HILL ROAD	2	2886	0.0	84	4	6542	38	10/09/91
BERKSHIRE AVENUE	3	4287	0.0	85	4	14171	104	12/13/91
KLAUS ANDERSON ROAD	3	3738	0.0	85	4	8473	57	10/10/91
VINING HILL ROAD	2	1395	0.0	87	4	3162	148	10/10/91
KIMBERLY ROAD	1	1400	0.0	88	4	4231	27	10/10/91
HONEY POT ROAD	1	930	0.0	88	4	1581	49	10/09/91
HASTINGS ROAD	1	430	0.0	88	4	812	44	10/09/91
GARGIN TERR	1	1741	0.0	89	4	4111	35	12/16/91
MATHEWS ROAD	1	1717	0.0	89	4	4378	32	12/16/91
REVERE ROAD	1	951	0.0	89	4	2695	29	02/04/92
GLORIA DRIVE	1	442	0.0	90	5	0	0	12/16/91
CRESENT CIRCLE	1	1455	0.0	90	5	0	0	10/11/91
FRED JACKSON ROAD	5	2144	0.0	93	5	0	0	10/09/91
KLINE ROAD	1	1390	0.0	94	5	0	0	10/09/91
KLINE ROAD	3	1535	0.0	94	5	0	0	10/09/91
BERKSHIRE AVENUE	2	2416	0.0	95	5	0	0	12/13/91
RIDGE ROAD	1	271	0.0	95	5	0	0	10/11/91
KLAUS ANDERSON ROAD	1	1105	0.0	95	5	0	0	10/10/91
GRANVILLE ROAD	1	4321	6.0	95	5	0	0	10/09/91
COES HILL ROAD	1	2917	0.0	95	5	0	0	10/09/91
CONCORD ROAD	1	1033	0.0	95	5	0	0	02/04/92
THURGOOD ROAD	1	266	8.0	95	5	0	0	02/04/92
BIRCHWOOD ROAD	1	2058	0.0	95	5	0	0	02/04/92
FERNWOOD ROAD	1	2350	0.0	95	5	0	0	02/04/92

Street Name	Sect. ID	Length (ft)	Curb Reveal	PCI	Repair	Current Cost	Benefit Value	Survey Date
SOUTH LOOMIS ROAD	4	2952	0.0	53	1	180400	45	10/10/91
HASTINGS ROAD	1	430	0.0	88	4	812	44	10/09/91
COES HILL ROAD	2	2886	0.0	84	4	6542	38	10/09/91
GARGIN TERR	1	1741	0.0	89	4	4111	35	12/16/91
GRANAUDOR CIRCLE	1	2565	8.0	83	4	6783	33	12/13/91
JEFFERY CIRCLE	1	1635	6.0	79	4	4633	33	10/10/91
SHAGG BARK ROAD	1	1273	6.0	80	4	3607	32	12/16/91
REDOAK DRIVE	1	798	6.0	80	4	2261	32	12/16/91
MATHEWS ROAD	1	1717	0.0	89	4	4378	32	12/16/91
SALEM ROAD	1	935	8.0	80	4	2649	32	02/04/92
FALMOUTH ROAD	1	912	8.0	80	4	2584	32	02/04/92
PINNEY WOOD ROAD	1	2036	0.0	76	4	6153	32	02/04/92
GEORGE LOOMIS ROAD	2	2400	0.0	42	2	51333	30	10/09/91
SUNNY SIDE ROAD	1	5757	0.0	42	2	123136	30	09/18/91
POWDER MILL ROAD	1	1290	0.0	56	1	114667	29	12/16/91
FRED JACKSON ROAD	1	2165	0.0	41	2	50517	29	10/09/91
REVERE ROAD	1	951	0.0	89	4	2695	29	02/04/92
KIMBERLY ROAD	1	1400	0.0	88	4	4231	27	10/10/91
MAPLE ST	1	718	0.0	55	3	4547	26	10/11/91
EVERGREEN ST	1	357	0.0	44	2	9024	25	10/11/91
HAM HILL ROAD	2	838	0.0	51	3	6369	24	10/09/91
FRED JACKSON ROAD	2	2920	0.0	51	3	22192	24	10/09/91
BUCKINGHAM ROAD	1	2216	0.0	55	3	16842	22	12/16/91
SHEEP PASTURE ROAD	1	2644	0.0	63	1	279089	22	12/13/91
SHEEP PASTURE ROAD	2	4379	0.0	61	3	29120	22	12/13/91
FENTON DRIVE	1	672	0.0	56	3	5107	21	10/09/91
HAM HILL ROAD	1	467	0.0	56	3	3549	21	10/09/91
LOGIE LANE	1	931	0.0	61	3	6486	21	10/10/91
JOHN MASON ROAD	1	1300	6.0	61	3	9057	21	10/09/91
HILLSIDE ROAD	2	3696	0.0	56	2	86240	21	10/01/91
HILLSIDE ROAD	3	5280	0.0	55	2	123200	21	10/01/91
SHEEP PASTURE ROAD	3	5997	0.0	67	3	39880	20	12/13/91
TAMMY ROAD	1	900	6.0	63	3	8550	15	10/10/91
KLAUS ANDERSON ROAD	4	5618	0.0	54	1	374533	15	10/10/91
SAM WEST ROAD	1	1111	0.0	43	1	74067	13	12/16/91
SAM WEST ROAD	2	1081	0.0	42	1	72067	13	12/16/91
INDUSTRIAL ROAD	1	1505	0.0	44	1	108694	11	09/18/91
HUDSON DRIVE	1	2133	0.0	46	1	177750	10	12/16/91
HILLSIDE ROAD	1	4752	0.0	54	1	316800	10	10/01/91
BUGBEE ROAD	1	1220	0.0	100	5	0	0	09/18/91
BERKSHIRE AVENUE	1	2927	0.0	99	5	0	0	12/13/91
BERKSHIRE AVENUE	2	2416	0.0	95	5	0	0	12/13/91
POWDER MILL ROAD	2	3464	0.0	100	5	0	0	12/16/91
GREAT BROOK DRIVE	1	168	4.0	100	5	0	0	12/16/91
GREAT BROOK LANE	1	365	4.0	100	5	0	0	12/16/91
GLORIA DRIVE	1	442	0.0	90	5	0	0	12/16/91
STERRETT DRIVE	1	2335	8.0	100	5	0	0	12/16/91
DEWITT CIRCLE	1	570	8.0	100	5	0	0	12/16/91
CEDER ROAD	1	535	0.0	99	5	0	0	10/11/91
RIDGE ROAD	1	271	0.0	95	5	0	0	10/11/91
JUNIPER ROAD	1	410	0.0	100	5	0	0	10/11/91
BONNEY VIEW ROAD	1	955	6.0	99	5	0	0	10/11/91
CRESENT CIRCLE	1	1455	0.0	90	5	0	0	10/11/91

Street Name	Sect. ID	Length (ft)	Curb Reveal	PCI	Repair	Current Cost	Benefit Value	Survey Date
KLAUS ANDERSON ROAD	1	1105	0.0	95	5	0	0	10/10/91
HUMEL LANE	1	820	6.0	100	5	0	0	10/09/91
GRANVILLE ROAD	1	4321	6.0	95	5	0	0	10/09/91
GRANVILLE ROAD	2	8310	6.0	100	5	0	0	10/09/91
GRANVILLE ROAD	3	6500	5.0	100	5	0	0	10/09/91
KLINE ROAD	1	1390	0.0	94	5	0	0	10/09/91
KLINE ROAD	2	1135	0.0	100	5	0	0	10/09/91
KLINE ROAD	3	1535	0.0	94	5	0	0	10/09/91
FRED JACKSON ROAD	4	1491	0.0	100	5	0	0	10/09/91
FRED JACKSON ROAD	5	2144	0.0	93	5	0	0	10/09/91
COES HILL ROAD	1	2917	0.0	95	5	0	0	10/09/91
HASTINGS ROAD	2	3048	0.0	100	5	0	0	10/09/91
CONCORD ROAD	1	1033	0.0	95	5	0	0	02/04/92
THURGOOD ROAD	1	266	8.0	95	5	0	0	02/04/92
BIRCHWOOD ROAD	1	2058	0.0	95	5	0	0	02/04/92
FERNWOOD ROAD	1	2350	0.0	95	5	0	0	02/04/92
SEFTON DRIVE	1	1155	0.0	95	5	0	0	02/04/92
RENNY ROAD	1	595	0.0	95	5	0	0	02/04/92
SHIRLEY ROAD	1	765	0.0	95	5	0	0	02/04/92
Grand Total:		286258				5651024		

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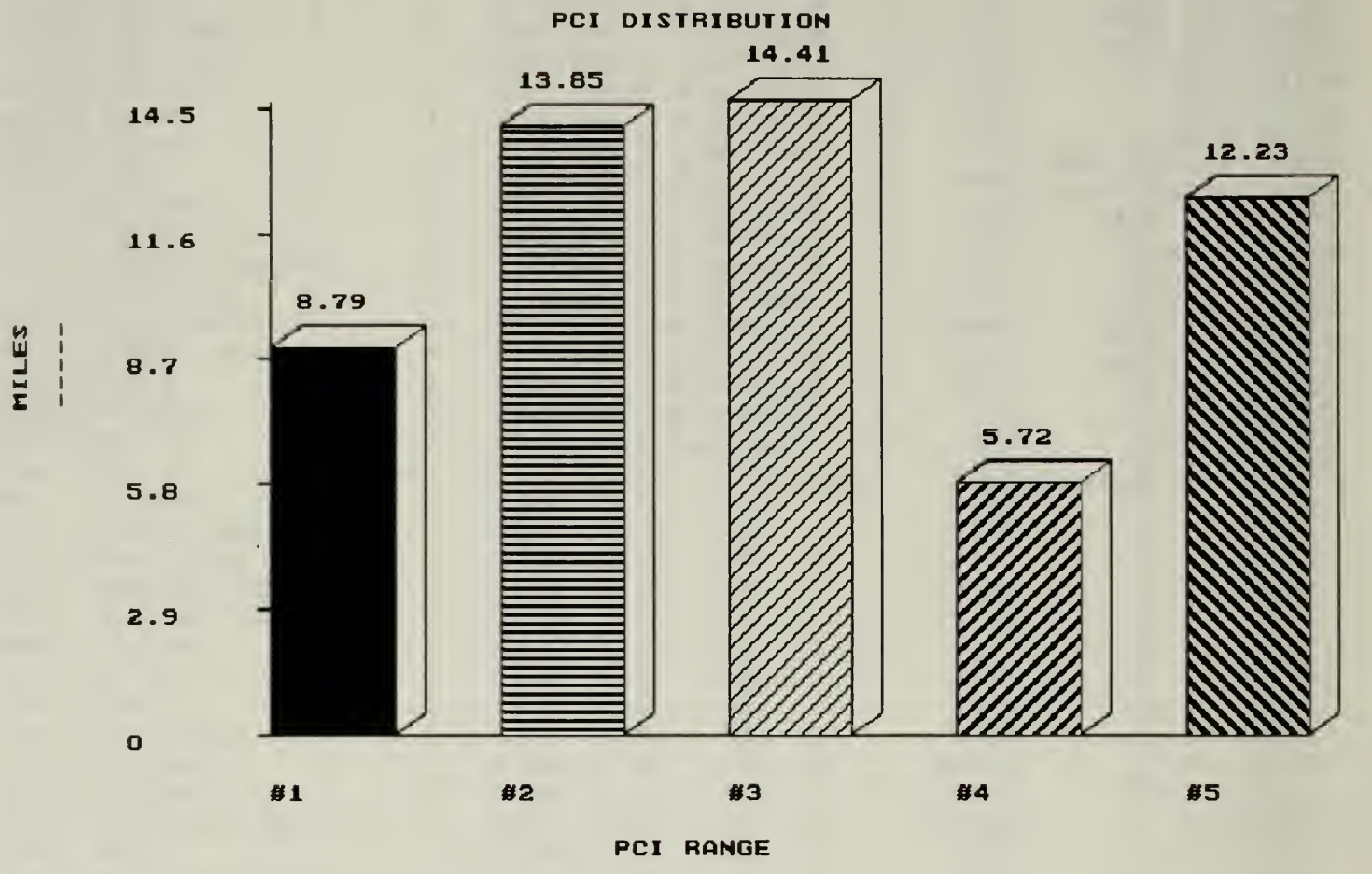
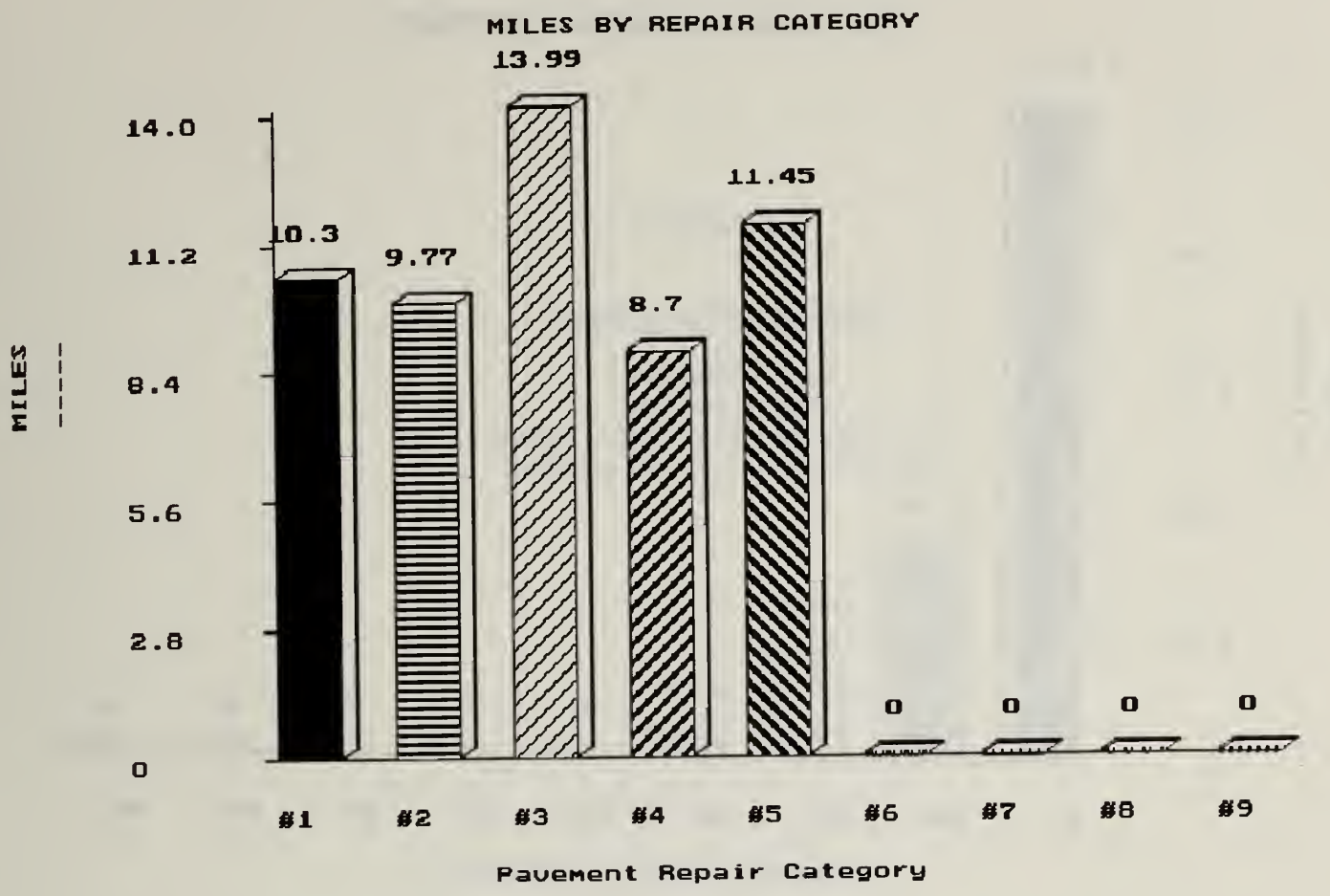
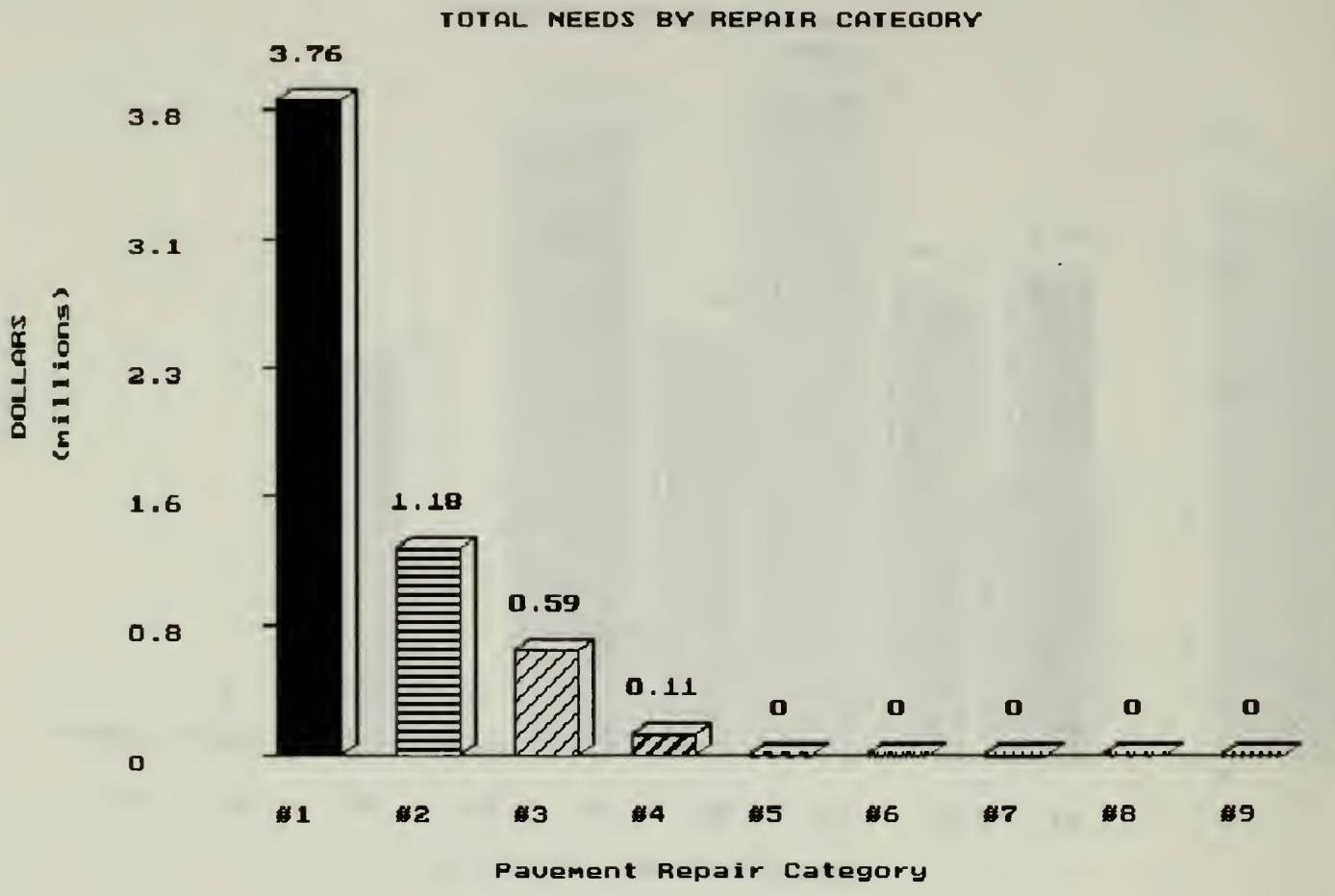

PCI DISTRIBUTION
MILES
14.5
11.6
8.7
5.8
2.9
0
8.79
13.85
14.41
5.72
12.23
#1
#2
#3
#4
#5
PCI RANGE

SOUTHWICK


MILES BY REPAIR CATEGORY
13.99
14.0
11.45
10.3
11.2
9.77
8.7
MILES
8.4
5.6
2.8
0
0
0
0
#1
#2
#3
#4
#5
#6
#7
#8
#9
Pavement Repair Category

SOUTHWICK


TOTAL NEEDS BY REPAIR CATEGORY
3.76
1.18
0.59
0.11
0
0
0
0
0
3.8
3.1
2.3
1.6
0.8
0
DOLLARS (millions)
#1
#2
#3
#4
#5
#6
#7
#8
#9
Pavement Repair Category

APPENDIX C

Summary of Plan Scenarios

Anticipated Budget
Deferred Budget
Budget to Maintain Present PCI Level
Budget to Get to Optimal PCI Level

Anticipated Budget

SOUTHWICK
Plan Budget Input Data
11/03/92

Available Budget For
Asphalt Pavement Improvements

Begin Plan in Year: 1992
Use Inflation Rate: 5.00 %

Year	Total
1992	$ 125
1993	$ 125
1994	$ 125
1995	$ 125
1996	$ 125
1997	$ 0
1998	$ 0
1999	$ 0
2000	$ 0
2001	$ 0
2002	$ 0
2003	$ 0
2004	$ 0
2005	$ 0
2006	$ 0
2007	$ 0
2008	$ 0
2009	$ 0
2010	$ 0
2011	$ 0
Total	$ 625

FUTURE CONDITION PROJECTION REPORT
BASED ON PCI

After Year - 1992

PCI Range:	1	2	3	4	5	Average PCI =	74
Miles	11.5	13.1	11.4	4.8	13.5		

Repair Number:	1	2	3	4	5	6	7	8	9	Total
Miles	13	9	10	8	14	0	0	0	0	54
Thousand Dollars	4704	1076	452	105	0	0	0	0	0	6337

After Year - 1993

PCI Range:	1	2	3	4	5	Average PCI =	72
Miles	18.6	8.4	6.1	8.4	12.7		

Repair Number:	1	2	3	4	5	6	7	8	9	Total
Miles	17	8	4	12	13	0	0	0	0	54
Thousand Dollars	6185	1036	183	150	0	0	0	0	0	7554

After Year - 1994

PCI Range:	1	2	3	4	5	Average PCI =	69
Miles	20.7	8.6	4.1	6.5	14.3		

Repair Number:	1	2	3	4	5	6	7	8	9	Total
Miles	19	7	4	9	14	0	0	0	0	54
Thousand Dollars	6821	972	160	118	0	0	0	0	0	8071

After Year - 1995

PCI Range:	1	2	3	4	5	Average PCI =	67
Miles	23.8	5.7	3.8	8.1	12.8		

Repair Number:	1	2	3	4	5	6	7	8	9	Total
Miles	21	6	4	10	13	0	0	0	0	54
Thousand Dollars	7651	707	173	138	0	0	0	0	0	8670

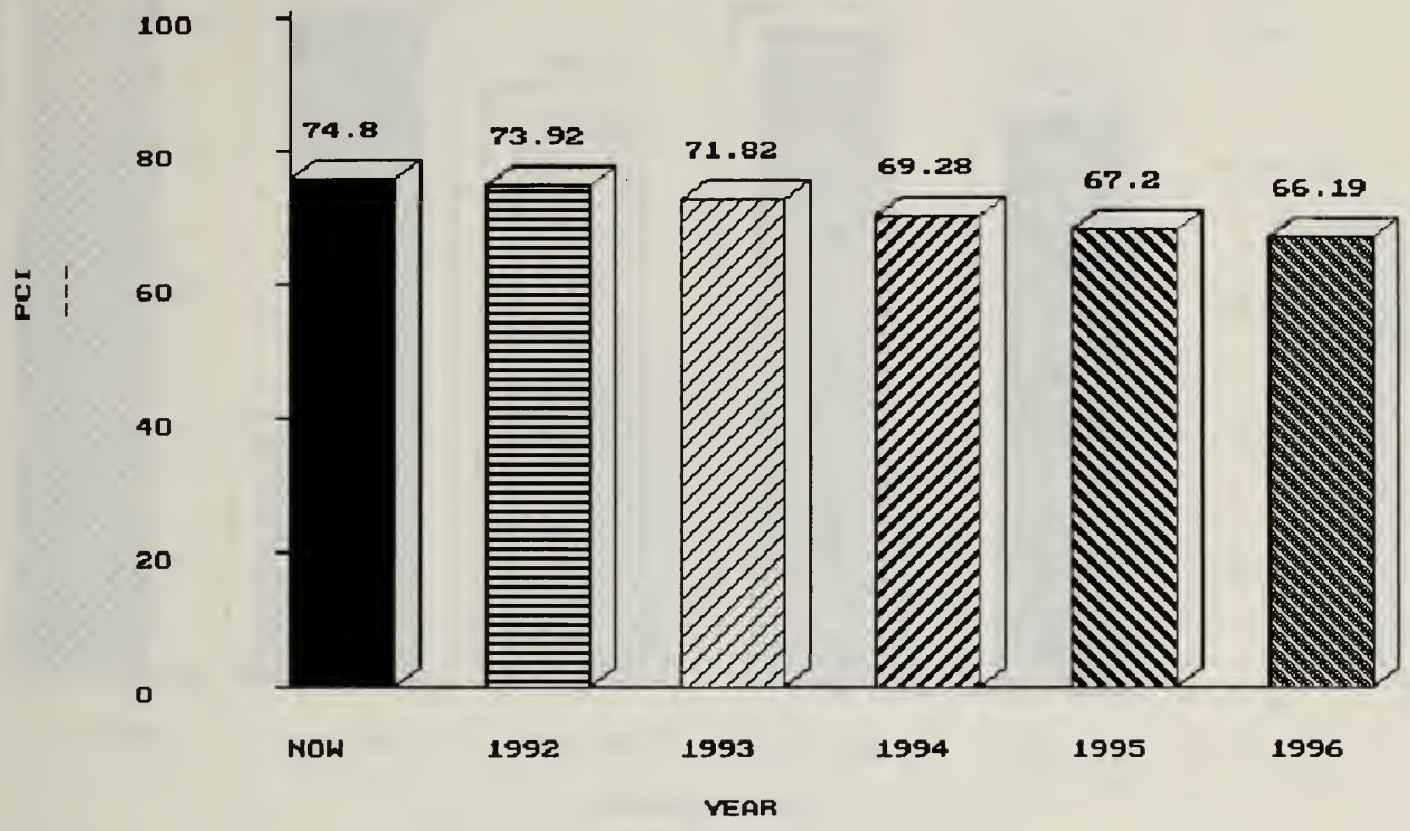
After Year - 1996

PCI Range:	1	2	3	4	5	Average PCI =	66
Miles	24.6	4.6	2.8	8.9	13.4		

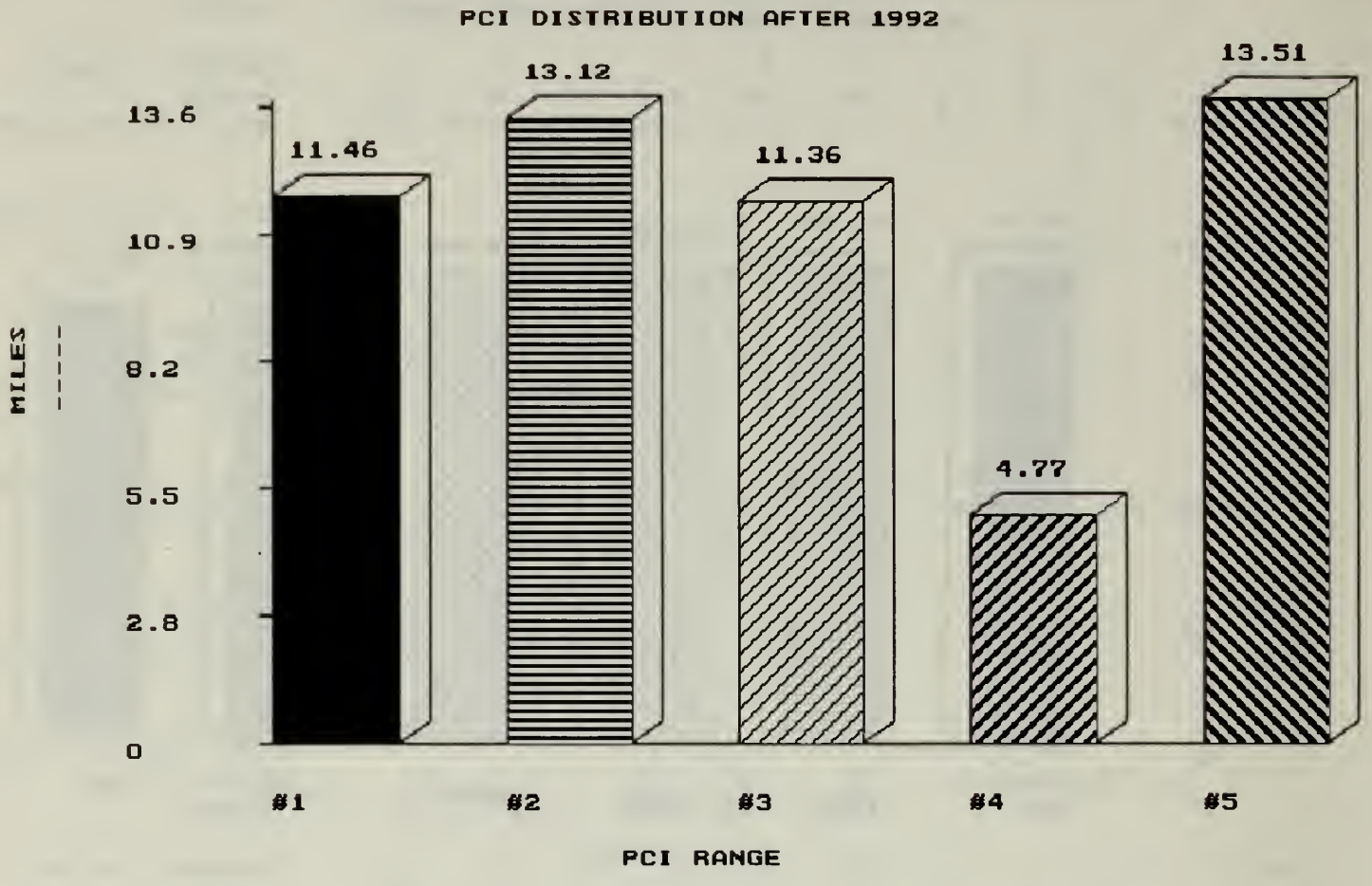
Repair Number:	1	2	3	4	5	6	7	8	9	Total
Miles	22	5	4	10	13	0	0	0	0	54
Thousand Dollars	8068	520	173	134	0	0	0	0	0	8895

SOUTHWICK

ESTIMATED AVERAGE FUTURE PCI VALUES

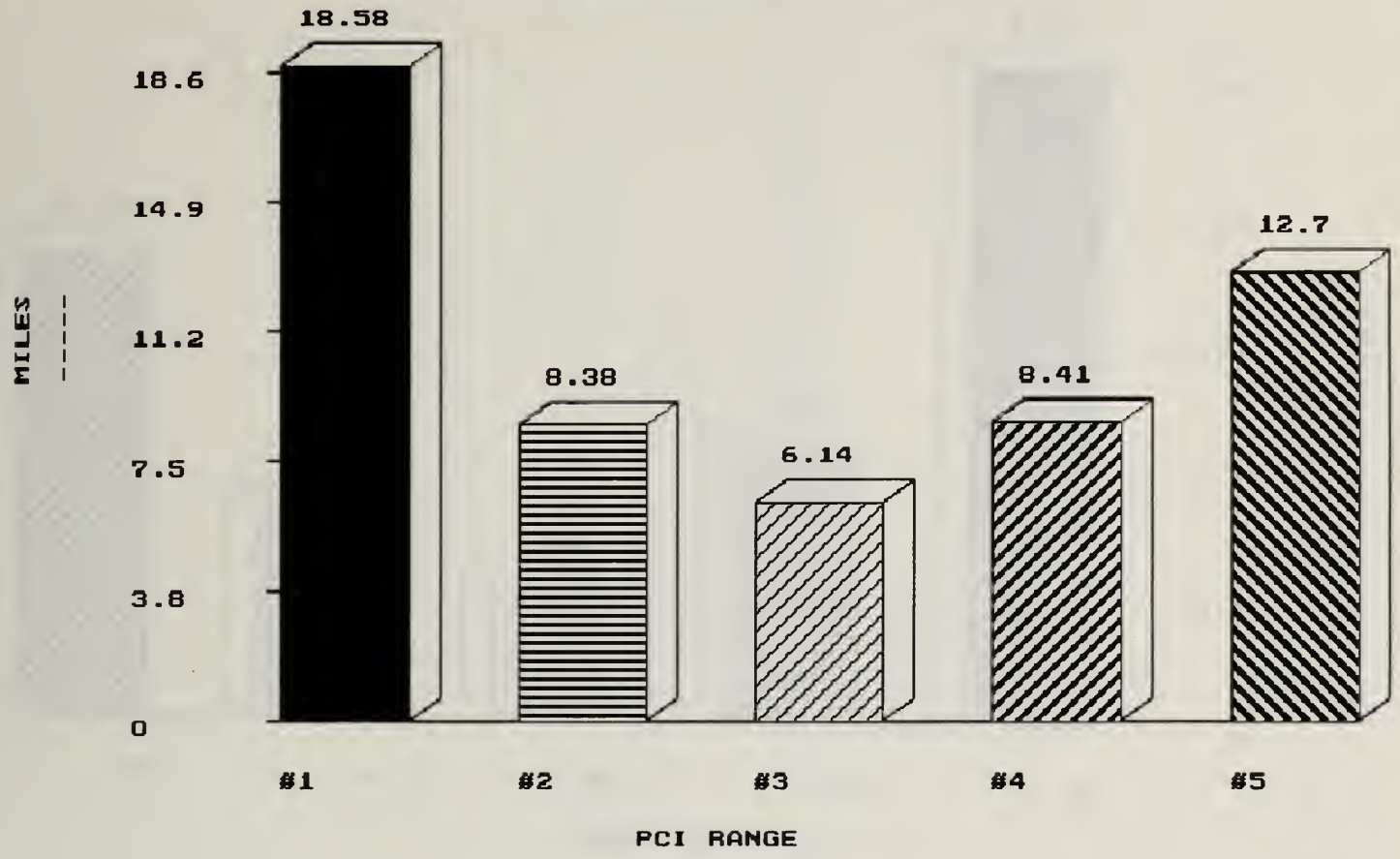


SOUTHWICK


PCI DISTRIBUTION AFTER 1992
13.6
10.9
8.2
5.5
2.8
0
MILES
11.46
13.12
11.36
4.77
13.51
#1
#2
#3
#4
#5
PCI RANGE

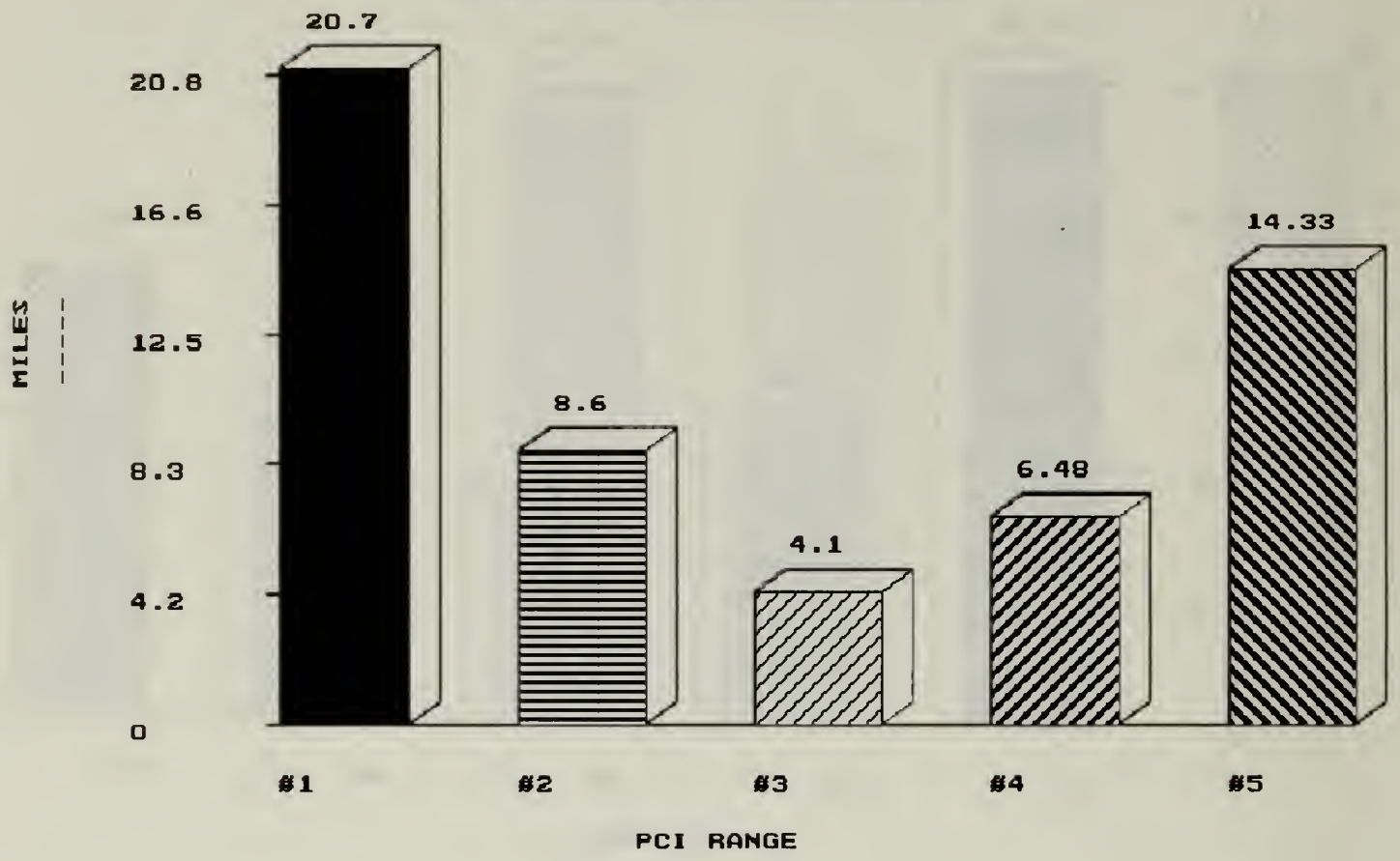
SOUTHWICK

PCI DISTRIBUTION AFTER 1993

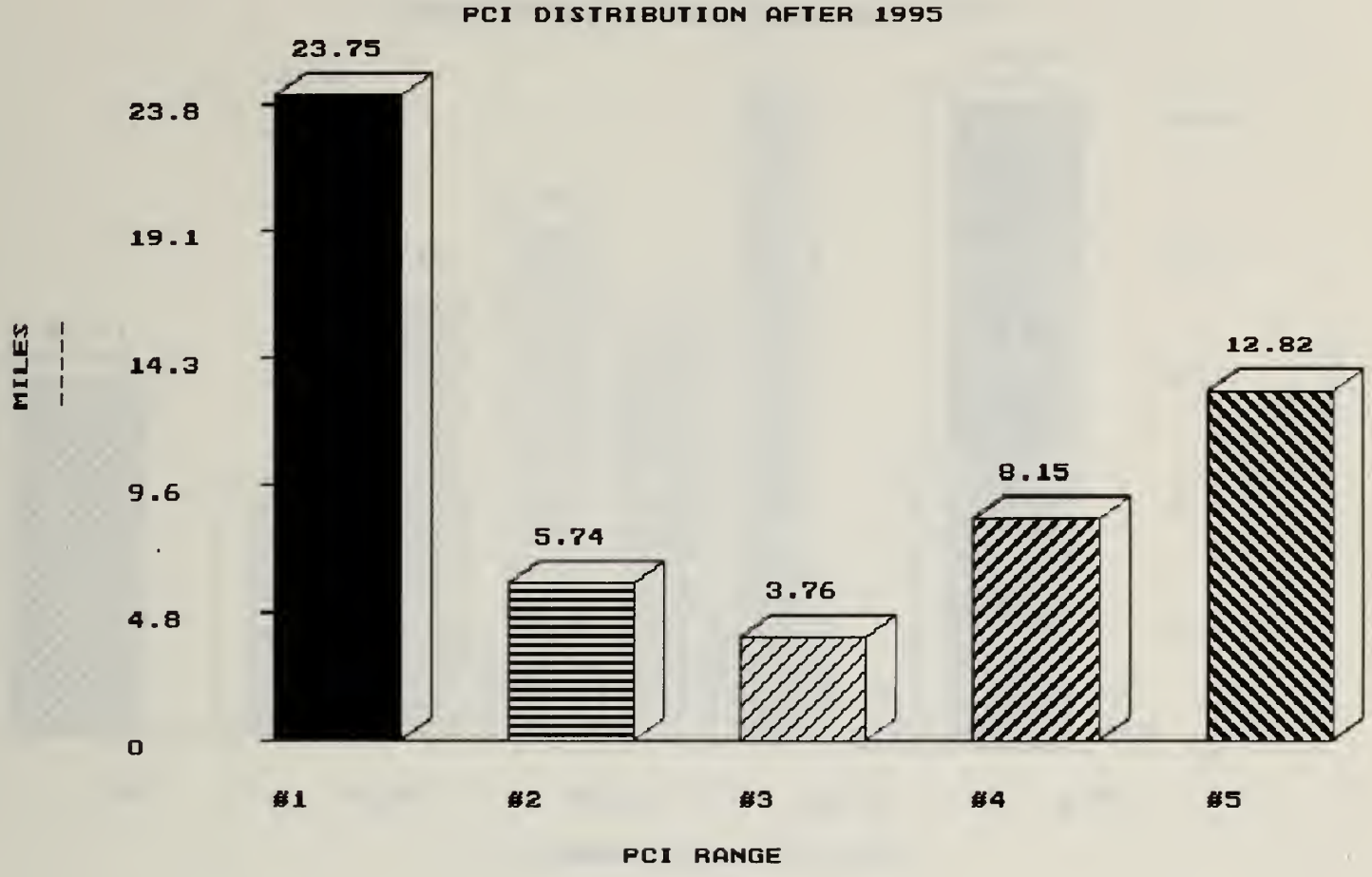


SOUTHWICK

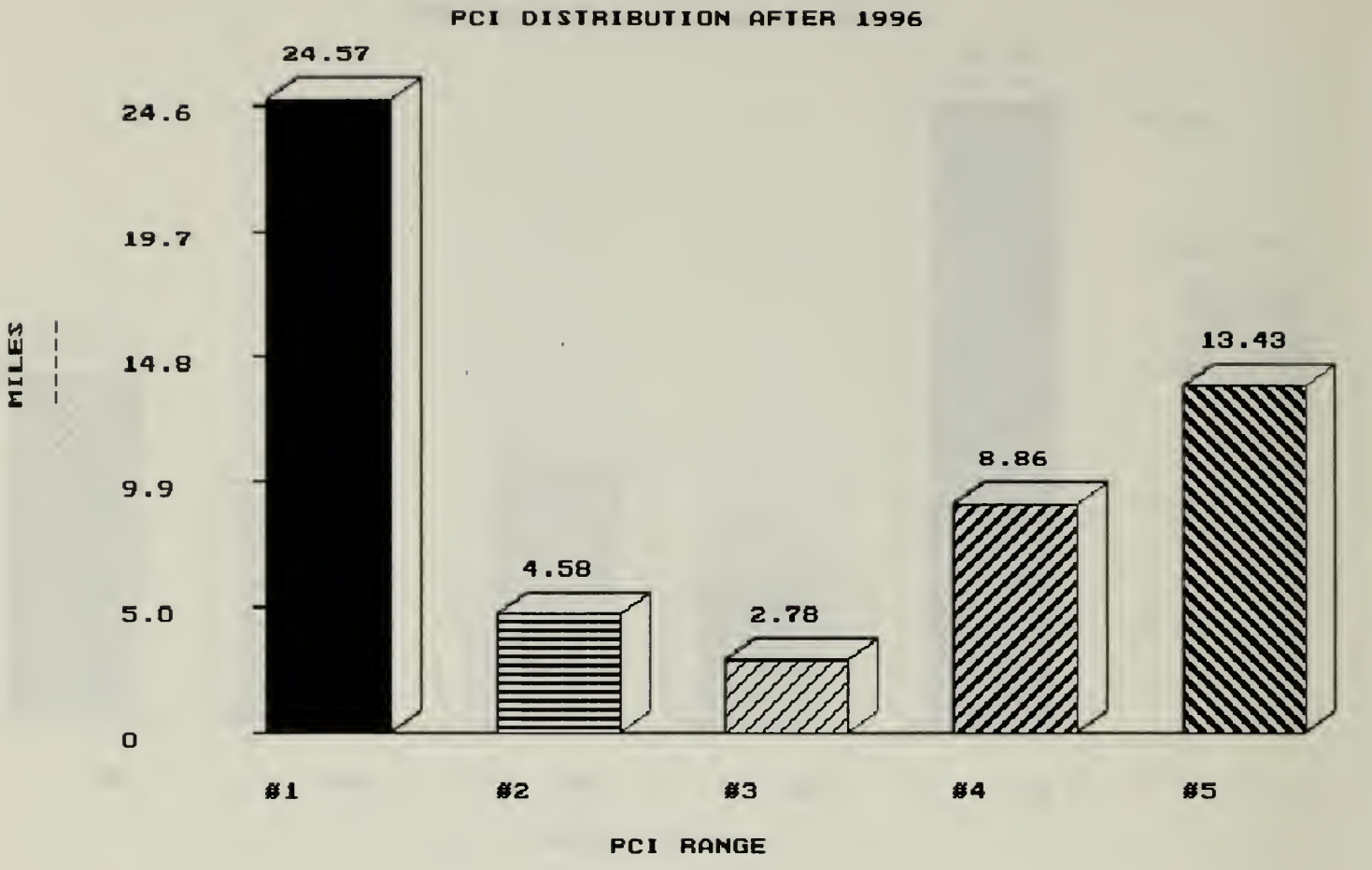
PCI DISTRIBUTION AFTER 1994



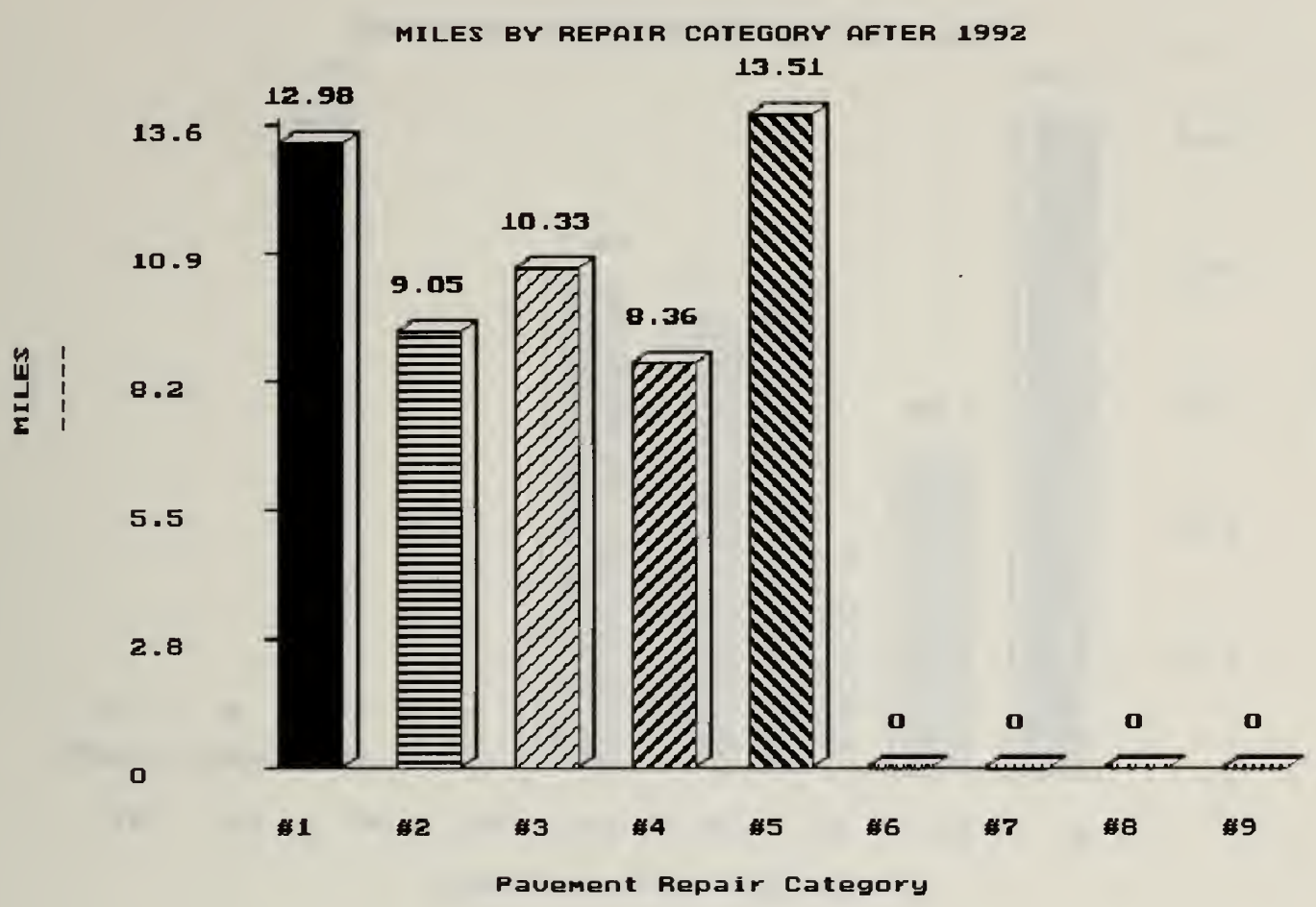
SOUTHWICK


PCI DISTRIBUTION AFTER 1995
23.75
5.74
3.76
8.15
12.82
23.8
19.1
14.3
9.6
4.8
0
MILES
#1
#2
#3
#4
#5
PCI RANGE

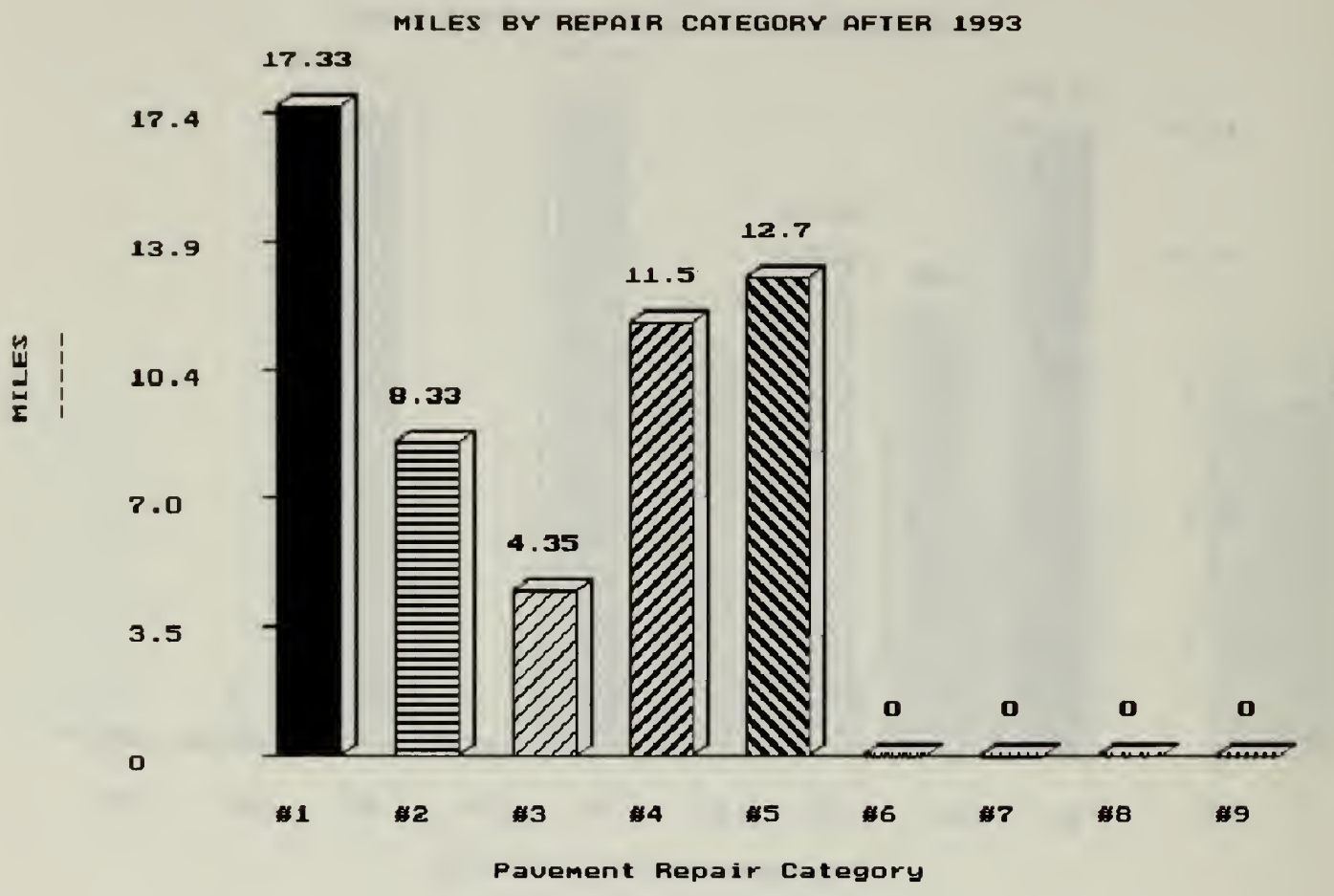
SOUTHWICK


PCI DISTRIBUTION AFTER 1996
24.57
24.6
19.7
14.8
9.9
5.0
0
MILES
4.58
2.78
8.86
13.43
#1
#2
#3
#4
#5
PCI RANGE

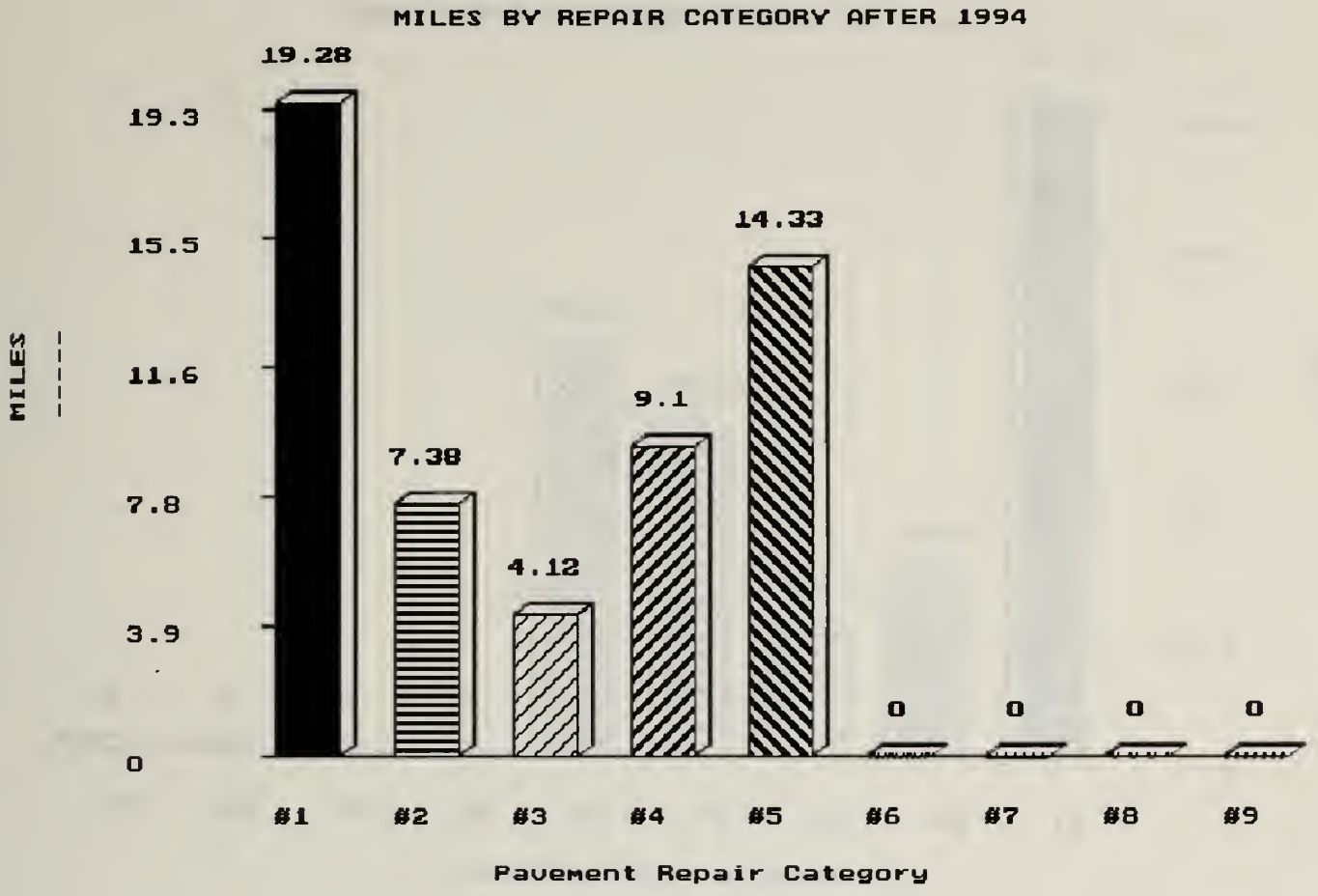
SOUTHWICK


MILES BY REPAIR CATEGORY AFTER 1992
MILES
13.6
10.9
8.2
5.5
2.8
0
12.98
9.05
10.33
8.36
13.51
0
0
0
0
#1
#2
#3
#4
#5
#6
#7
#8
#9
Pavement Repair Category

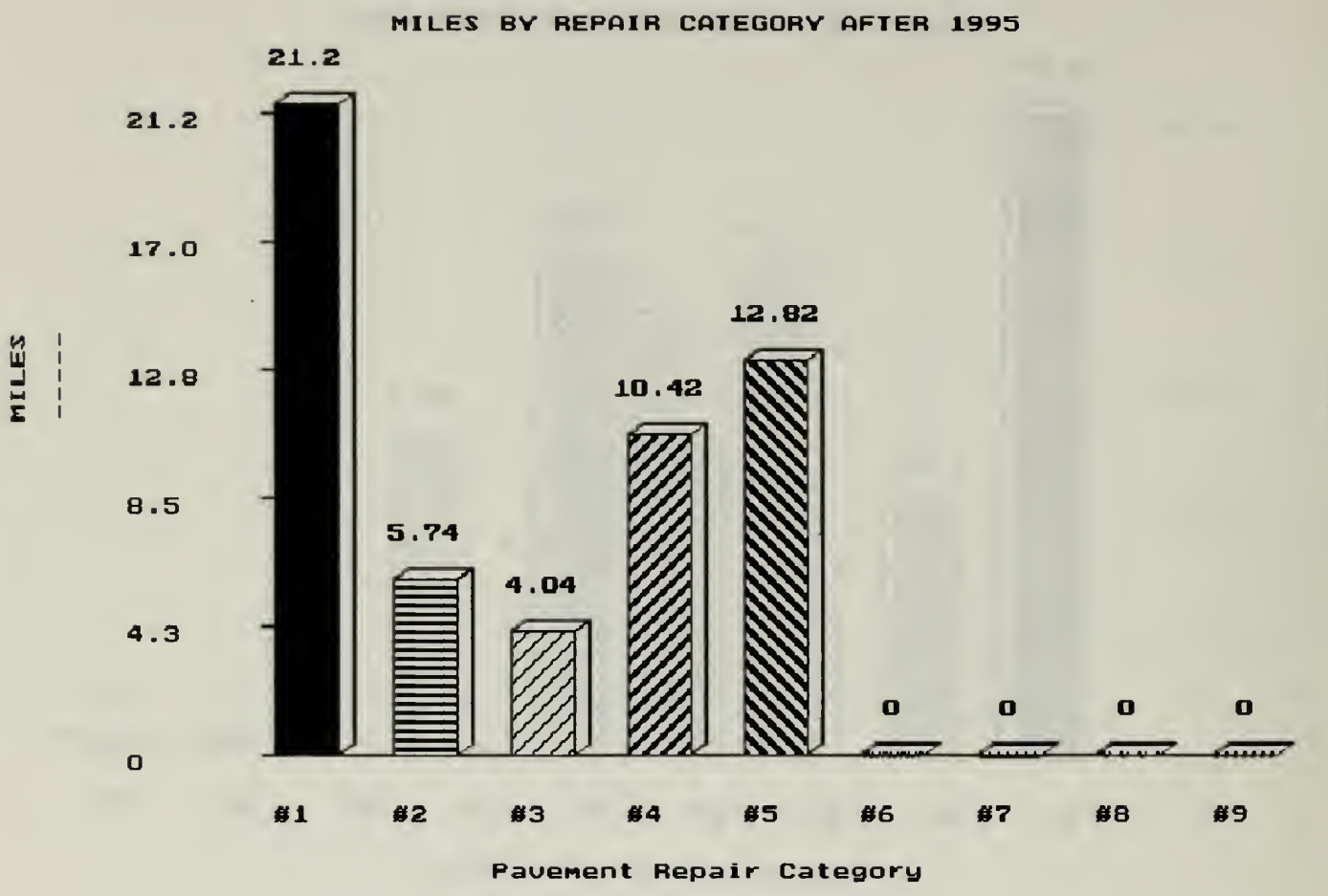
SOUTHWICK


MILES BY REPAIR CATEGORY AFTER 1993
MILES
17.4
13.9
10.4
7.0
3.5
0
17.33
8.33
4.35
11.5
12.7
0
0
0
0
#1
#2
#3
#4
#5
#6
#7
#8
#9
Pavement Repair Category

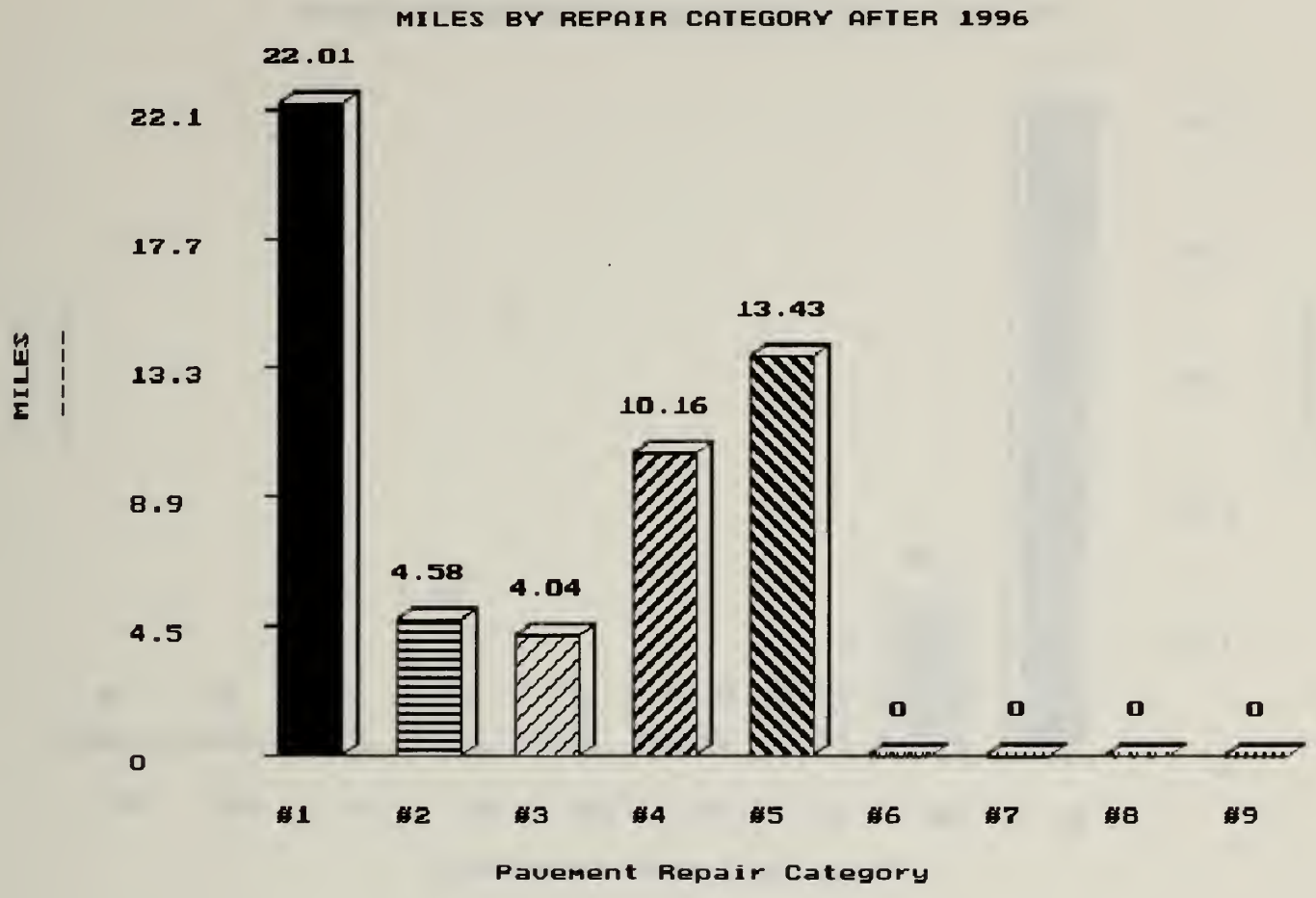
SOUTHWICK


MILES BY REPAIR CATEGORY AFTER 1994
MILES
19.3
15.5
11.6
7.8
3.9
0
19.28
7.38
4.12
9.1
14.33
0
0
0
0
#1
#2
#3
#4
#5
#6
#7
#8
#9
Pavement Repair Category

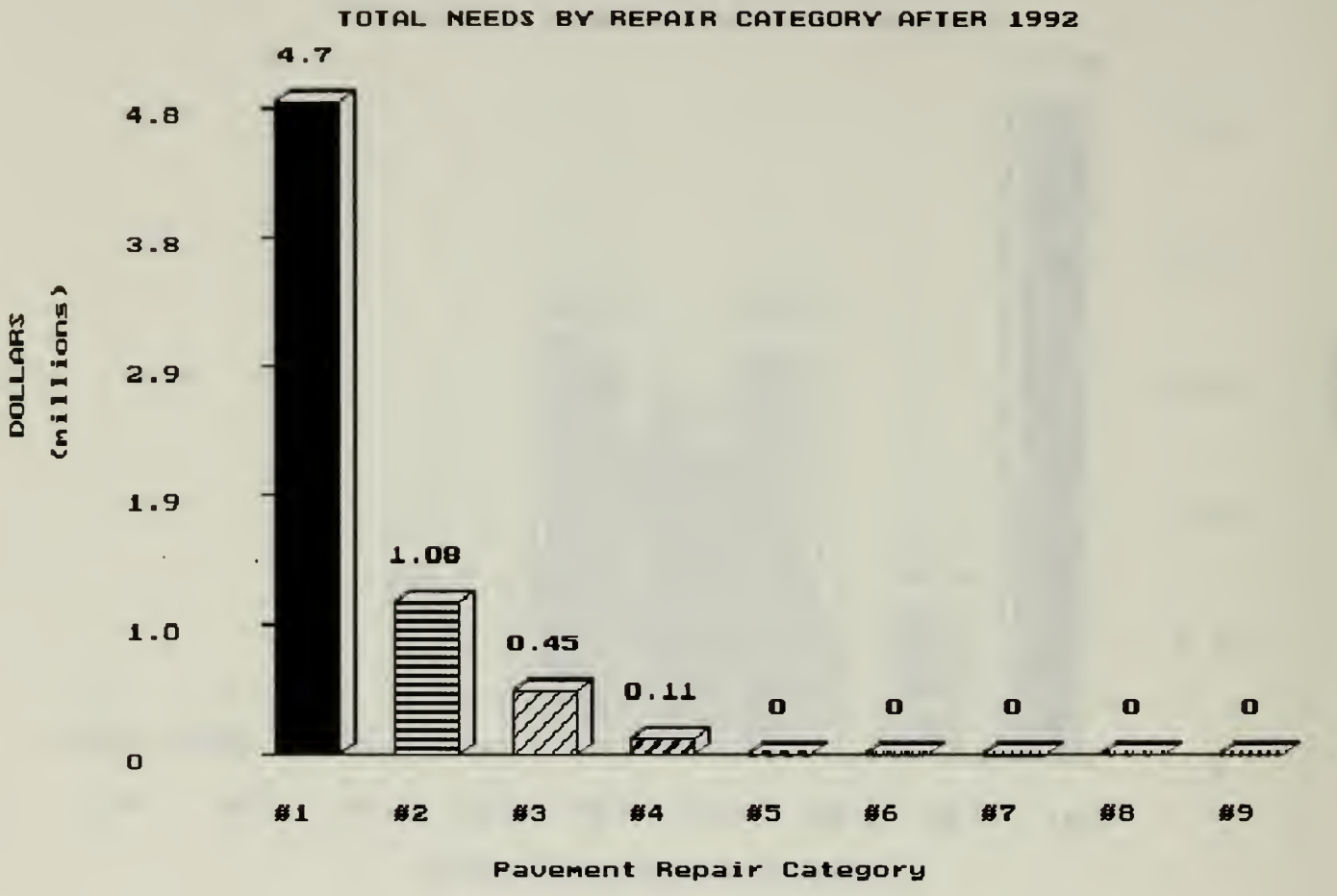
SOUTHWICK


MILES BY REPAIR CATEGORY AFTER 1995
MILES
21.2
17.0
12.8
8.5
4.3
0
21.2
5.74
4.04
10.42
12.82
0
0
0
0
#1
#2
#3
#4
#5
#6
#7
#8
#9
Pavement Repair Category

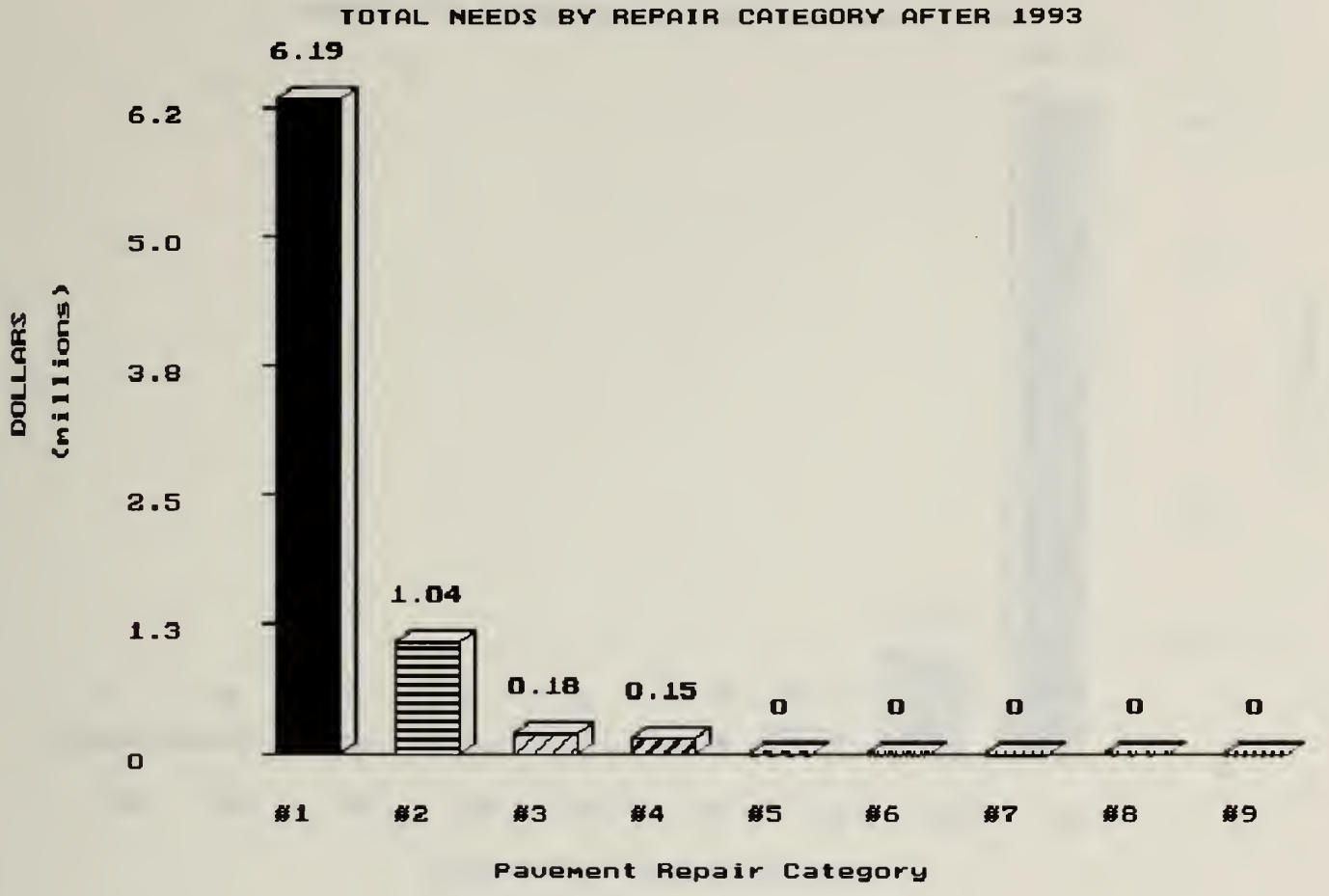
SOUTHWICK


MILES BY REPAIR CATEGORY AFTER 1996
MILES
22.1
17.7
13.3
8.9
4.5
0
22.01
4.58
4.04
10.16
13.43
0
0
0
0
#1
#2
#3
#4
#5
#6
#7
#8
#9
Pavement Repair Category

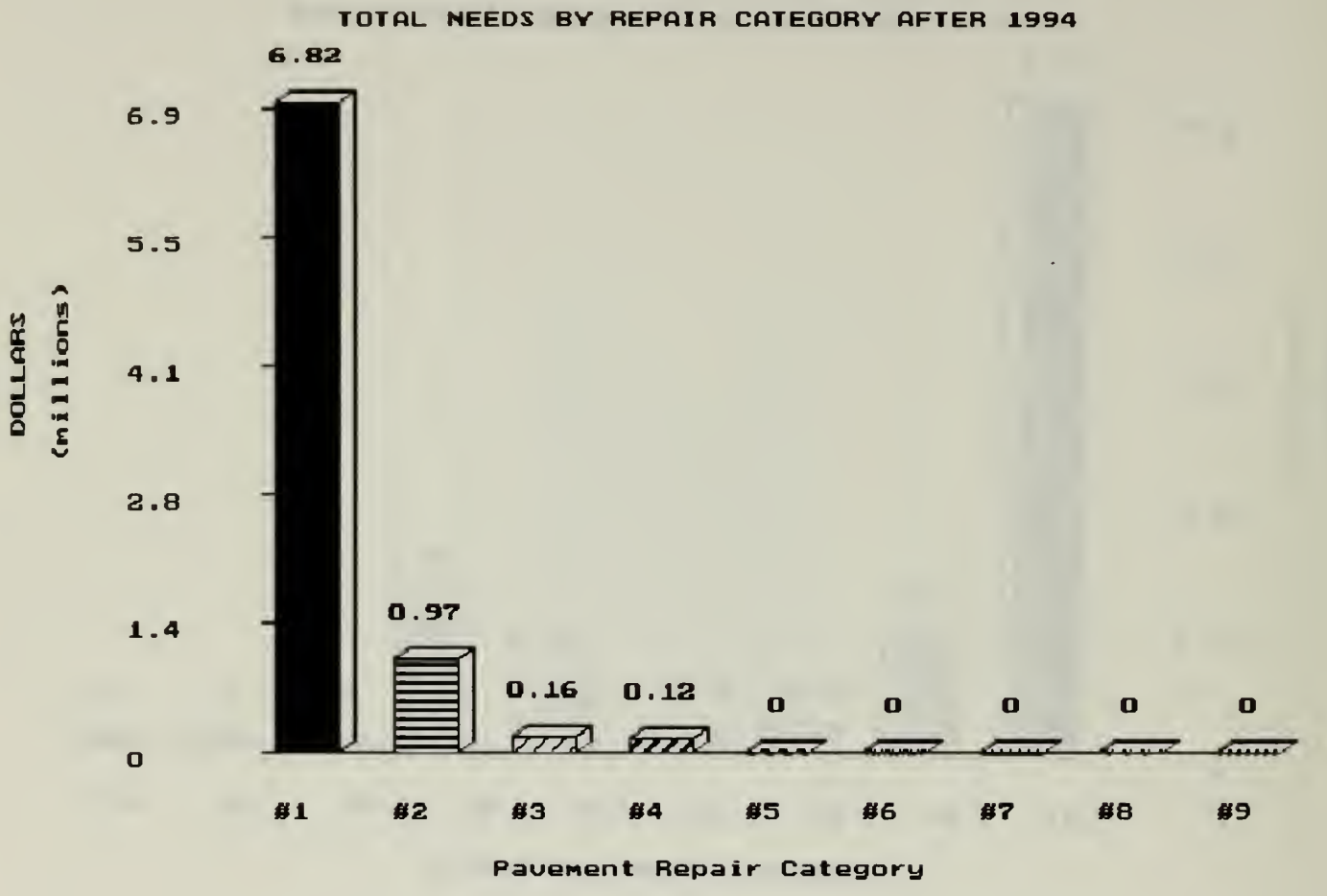
SOUTHWICK


TOTAL NEEDS BY REPAIR CATEGORY AFTER 1992
DOLLARS (millions)
4.8
3.8
2.9
1.9
1.0
0
4.7
1.08
0.45
0.11
0
0
0
0
0
#1
#2
#3
#4
#5
#6
#7
#8
#9
Pavement Repair Category

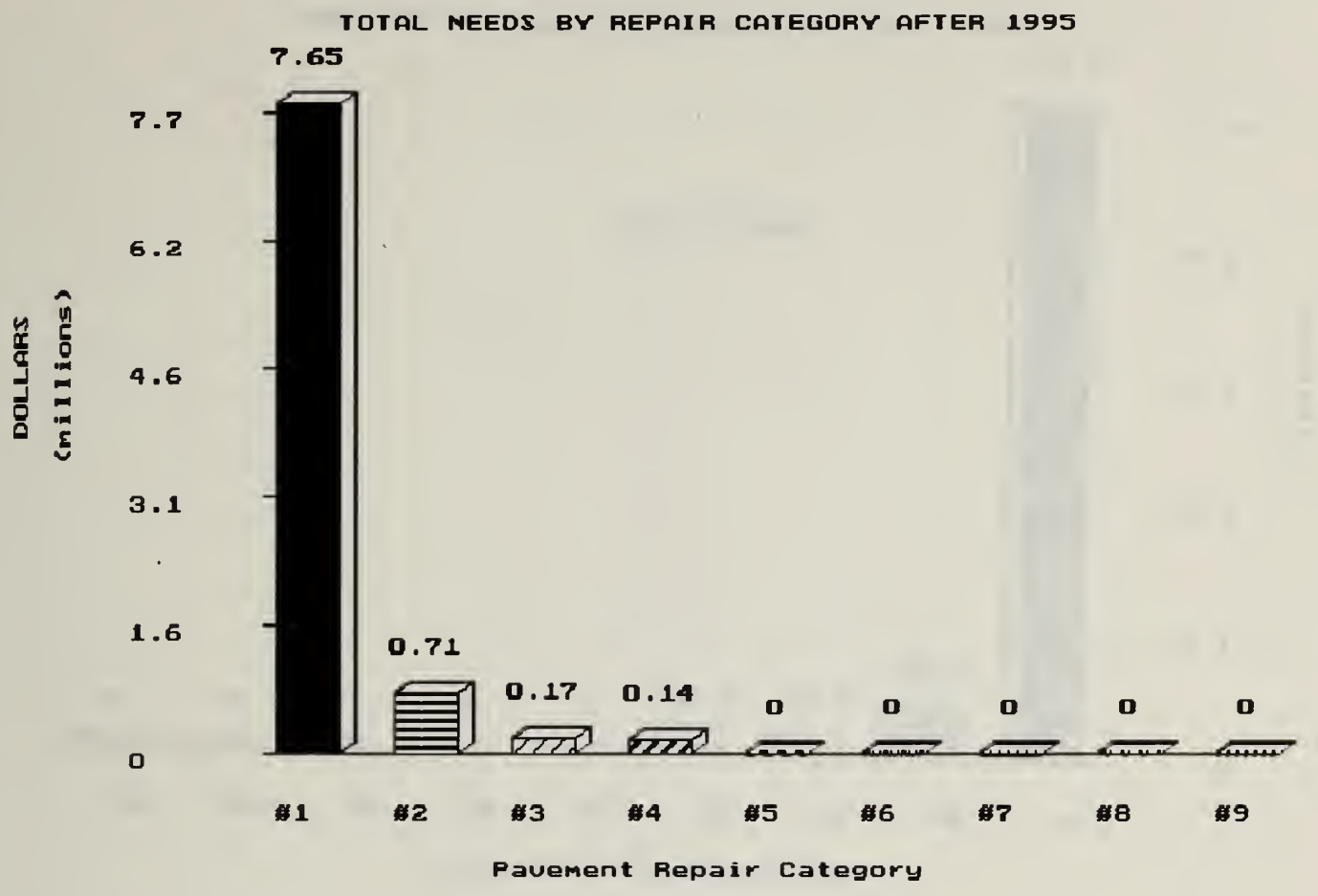
SOUTHWICK


TOTAL NEEDS BY REPAIR CATEGORY AFTER 1993
6.19
1.04
0.18
0.15
0
0
0
0
0
6.2
5.0
3.8
2.5
1.3
0
DOLLARS
(millions)
#1
#2
#3
#4
#5
#6
#7
#8
#9
Pavement Repair Category

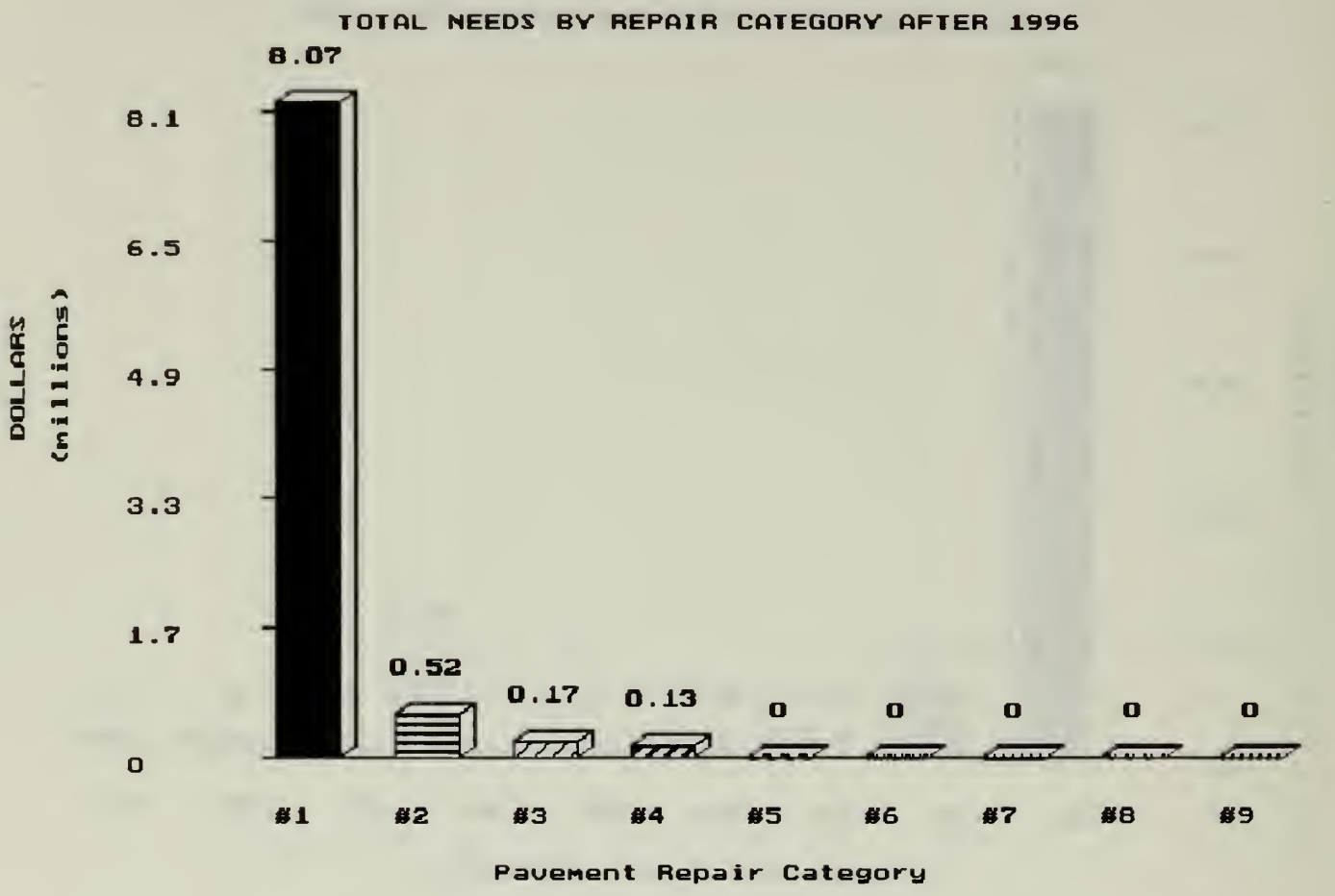
SOUTHWICK


TOTAL NEEDS BY REPAIR CATEGORY AFTER 1994
6.82
0.97
0.16
0.12
0
0
0
0
0
6.9
5.5
4.1
2.8
1.4
0
DOLLARS
(millions)
#1
#2
#3
#4
#5
#6
#7
#8
#9
Pavement Repair Category

SOUTHWICK


TOTAL NEEDS BY REPAIR CATEGORY AFTER 1995
7.65
0.71
0.17
0.14
0
0
0
0
0
7.7
6.2
4.6
3.1
1.6
0
DOLLARS
(millions)
#1
#2
#3
#4
#5
#6
#7
#8
#9
Pavement Repair Category

SOUTHWICK


TOTAL NEEDS BY REPAIR CATEGORY AFTER 1996
8.07
8.1
6.5
4.9
3.3
1.7
0
DOLLARS
(millions)
0.52
0.17
0.13
0
0
0
0
0
#1
#2
#3
#4
#5
#6
#7
#8
#9
Pavement Repair Category

Deferred Budget

SOUTHWICK
Plan Budget Input Data
11/19/92

Available Budget For
Asphalt Pavement Improvements

Begin Plan in Year: 1992
Use Inflation Rate: 5.00 %

Year	Total
1992	$ 0
1993	$ 0
1994	$ 0
1995	$ 0
1996	$ 625
1997	$ 0
1998	$ 0
1999	$ 0
2000	$ 0
2001	$ 0
2002	$ 0
2003	$ 0
2004	$ 0
2005	$ 0
2006	$ 0
2007	$ 0
2008	$ 0
2009	$ 0
2010	$ 0
2011	$ 0
Total	$ 625

FUTURE CONDITION PROJECTION REPORT
BASED ON PCI

After Year - 1992

PCI Range:	1	2	3	4	5	Average PCI =	73
Miles	11.5	13.1	14.0	5.5	10.1		

Repair Number:	1	2	3	4	5	6	7	8	9	Total
Miles	13	9	13	9	10	0	0	0	0	54
Thousand Dollars	4704	1076	567	115	0	0	0	0	0	6461

After Year - 1993

PCI Range:	1	2	3	4	5	Average PCI =	69
Miles	18.6	11.8	8.8	8.5	6.5		

Repair Number:	1	2	3	4	5	6	7	8	9	Total
Miles	17	12	6	13	6	0	0	0	0	54
Thousand Dollars	6185	1565	249	162	0	0	0	0	0	8161

After Year - 1994

PCI Range:	1	2	3	4	5	Average PCI =	65
Miles	21.4	13.1	5.7	7.5	6.5		

Repair Number:	1	2	3	4	5	6	7	8	9	Total
Miles	20	12	5	11	6	0	0	0	0	54
Thousand Dollars	7108	1670	171	144	0	0	0	0	0	9093

After Year - 1995

PCI Range:	1	2	3	4	5	Average PCI =	62
Miles	28.4	7.4	5.1	7.0	6.2		

Repair Number:	1	2	3	4	5	6	7	8	9	Total
Miles	26	7	4	10	6	0	0	0	0	54
Thousand Dollars	9596	954	174	132	0	0	0	0	0	10856

After Year - 1996

PCI Range:	1	2	3	4	5	Average PCI =	62
Miles	28.7	4.8	4.6	6.9	9.1		

Repair Number:	1	2	3	4	5	6	7	8	9	Total
Miles	26	5	4	10	9	0	0	0	0	54
Thousand Dollars	9861	552	173	126	0	0	0	0	0	10713

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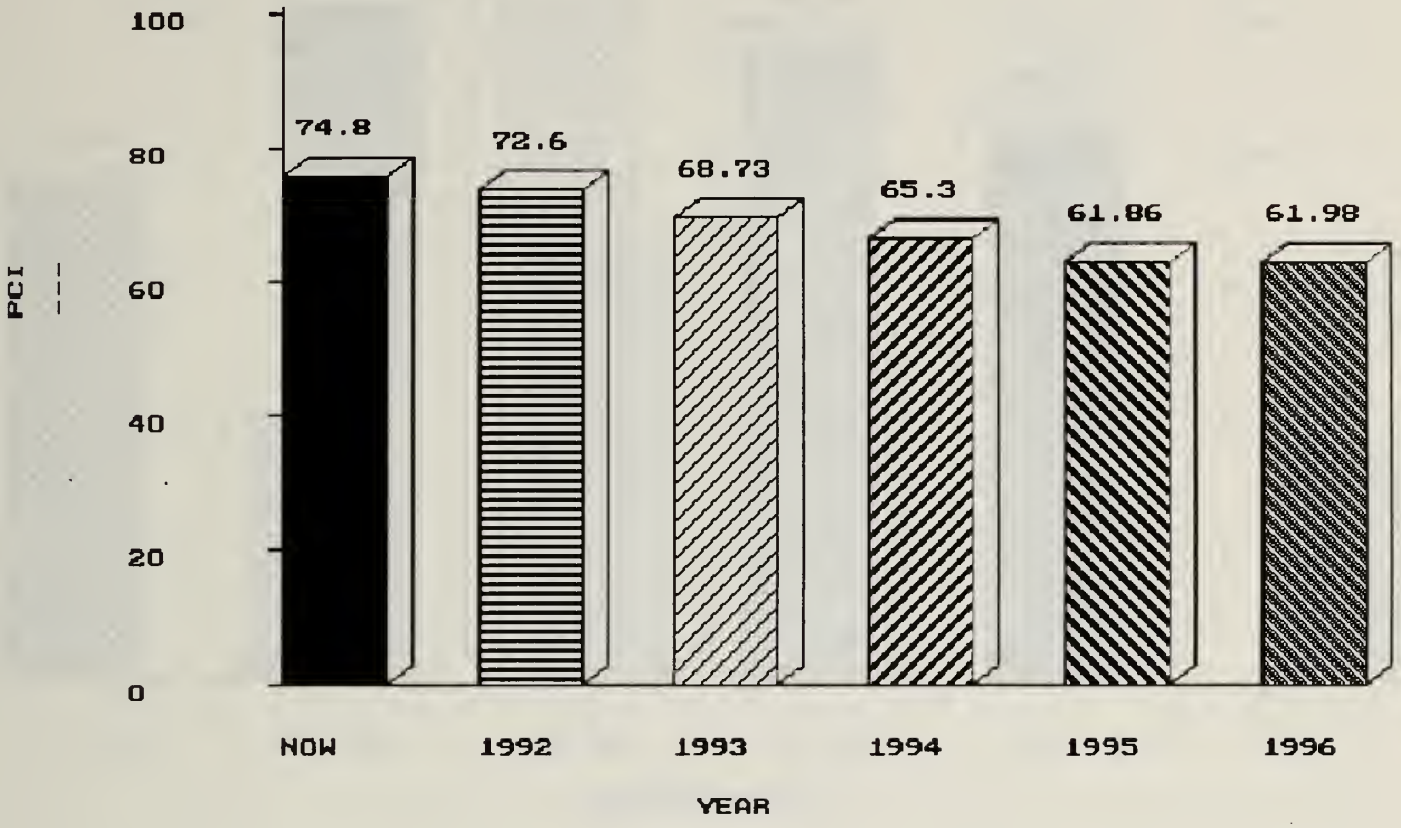
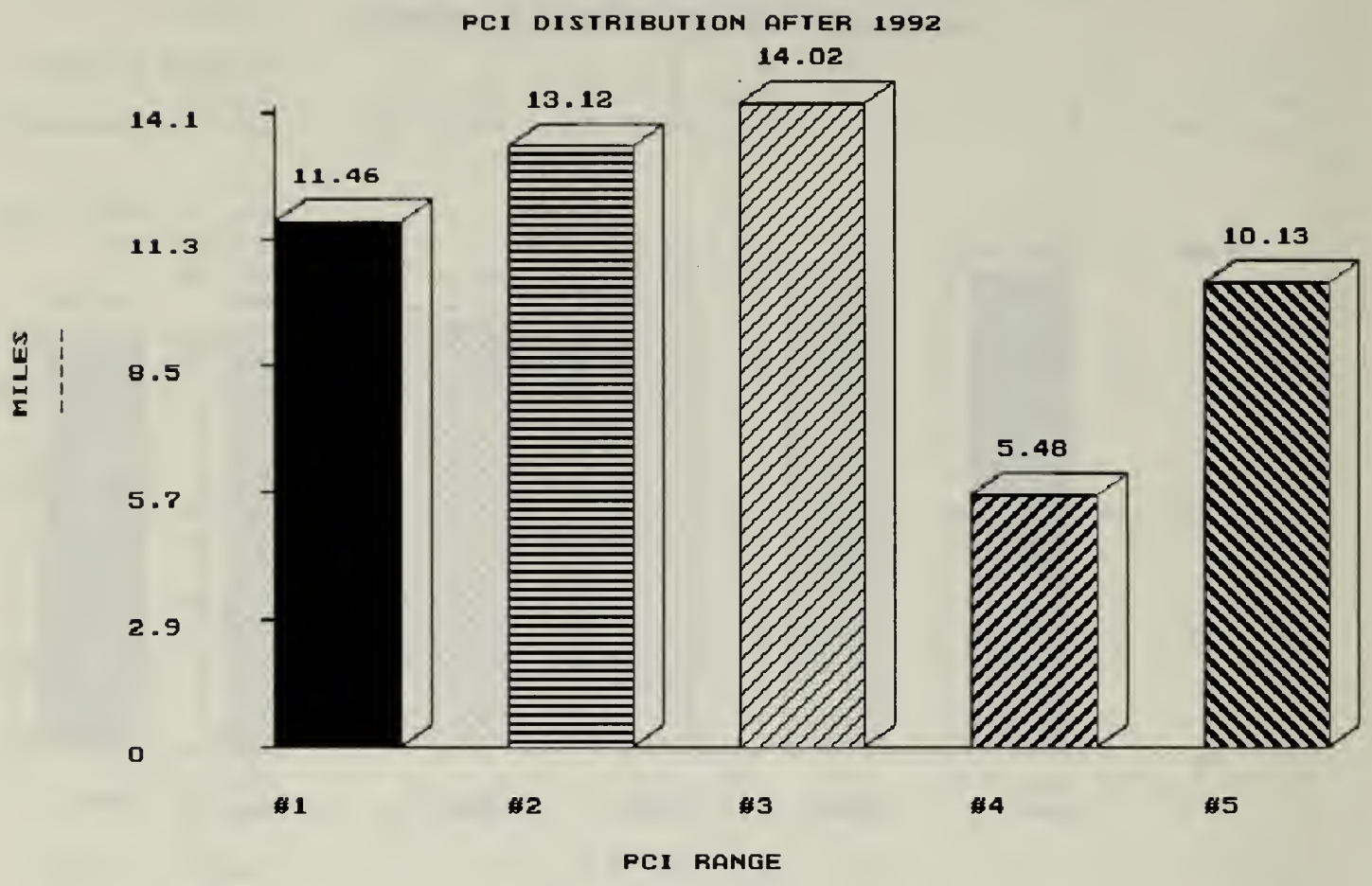
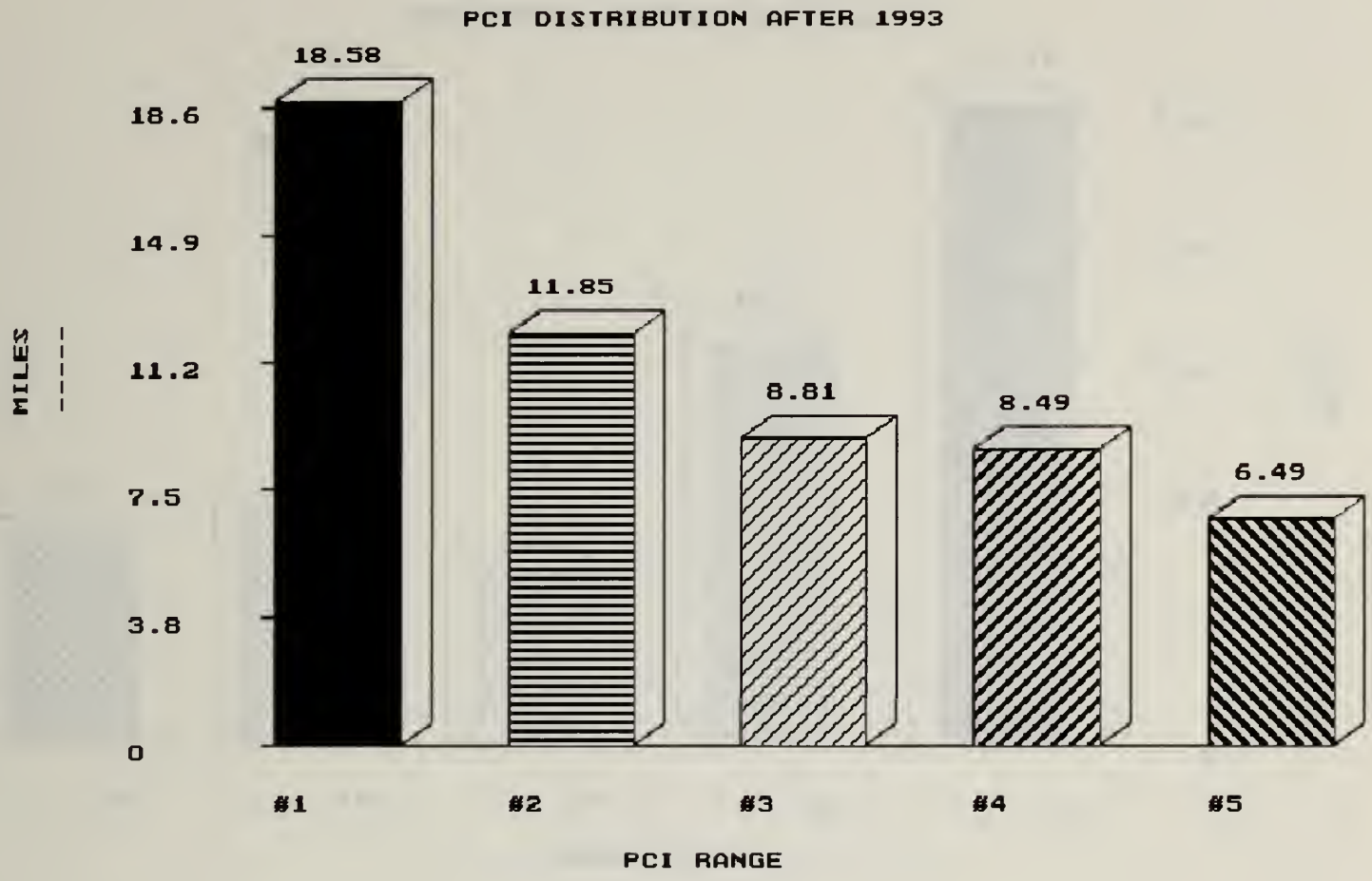
ESTIMATED AVERAGE FUTURE PCI VALUES



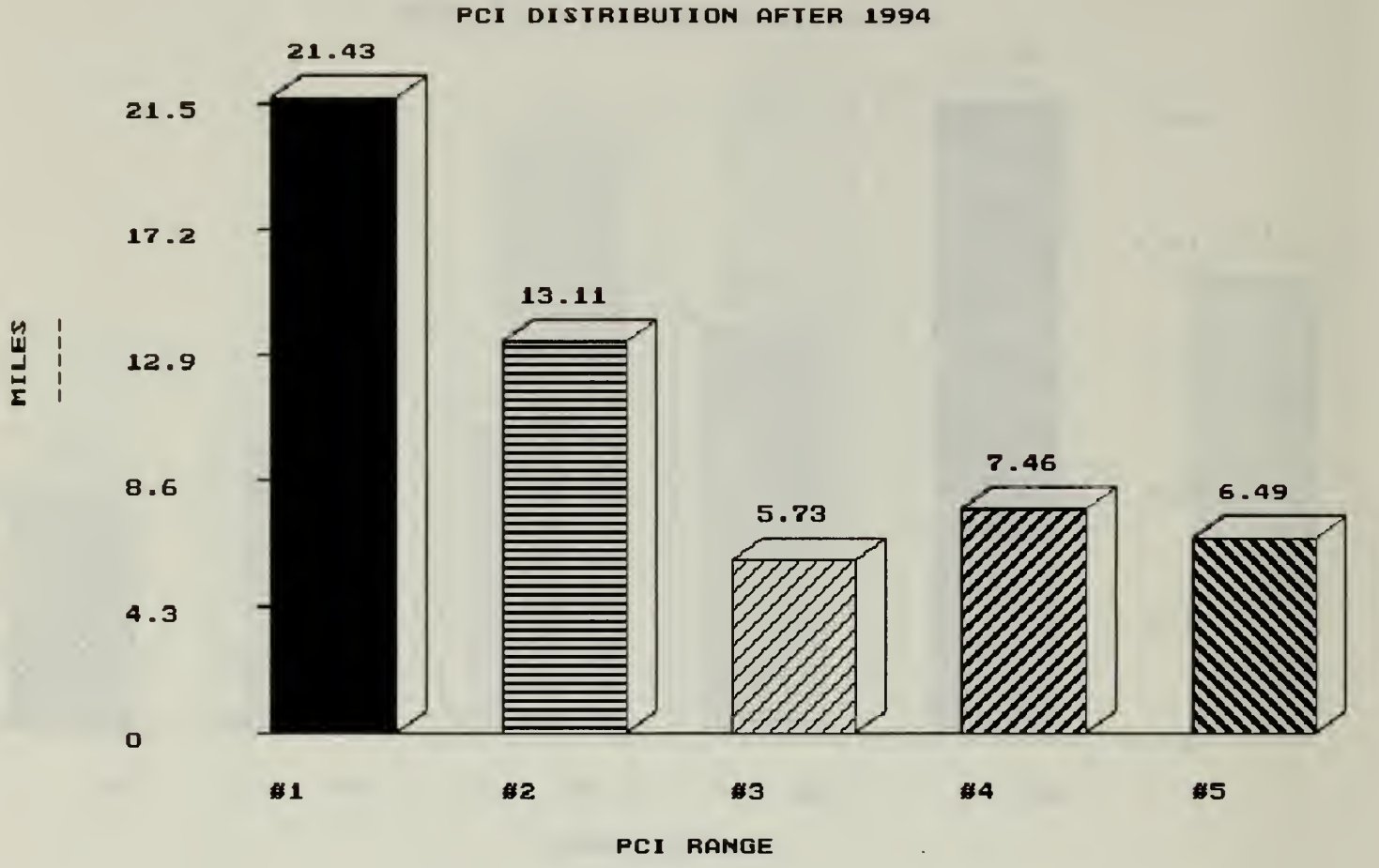
SOUTHWICK


PCI DISTRIBUTION AFTER 1992
14.02
13.12
11.46
10.13
5.48
14.1
11.3
8.5
5.7
2.9
0
MILES
#1
#2
#3
#4
#5
PCI RANGE

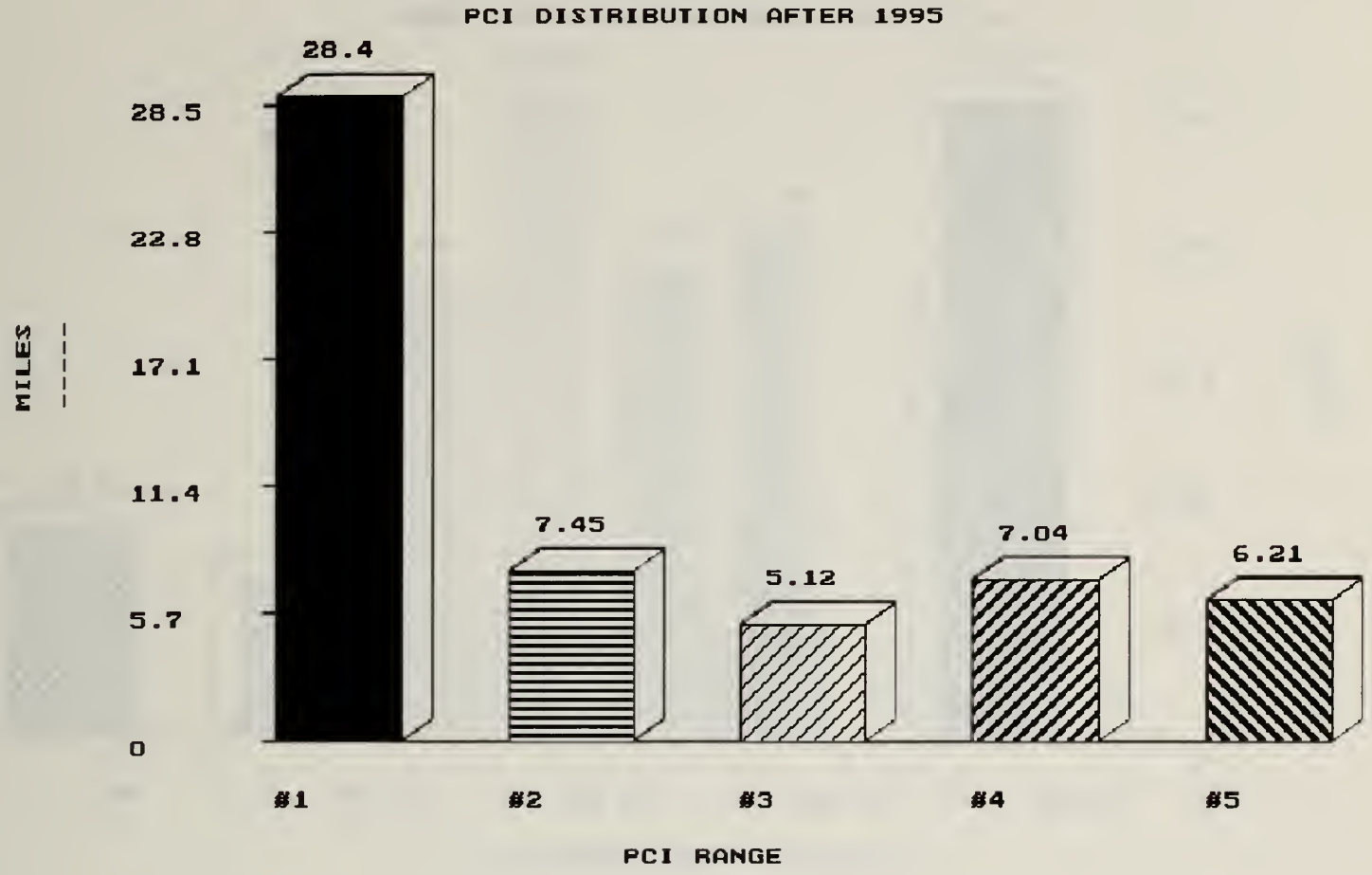
SOUTHWICK


PCI DISTRIBUTION AFTER 1993
18.58
11.85
8.81
8.49
6.49
18.6
14.9
11.2
7.5
3.8
0
MILES
#1
#2
#3
#4
#5
PCI RANGE

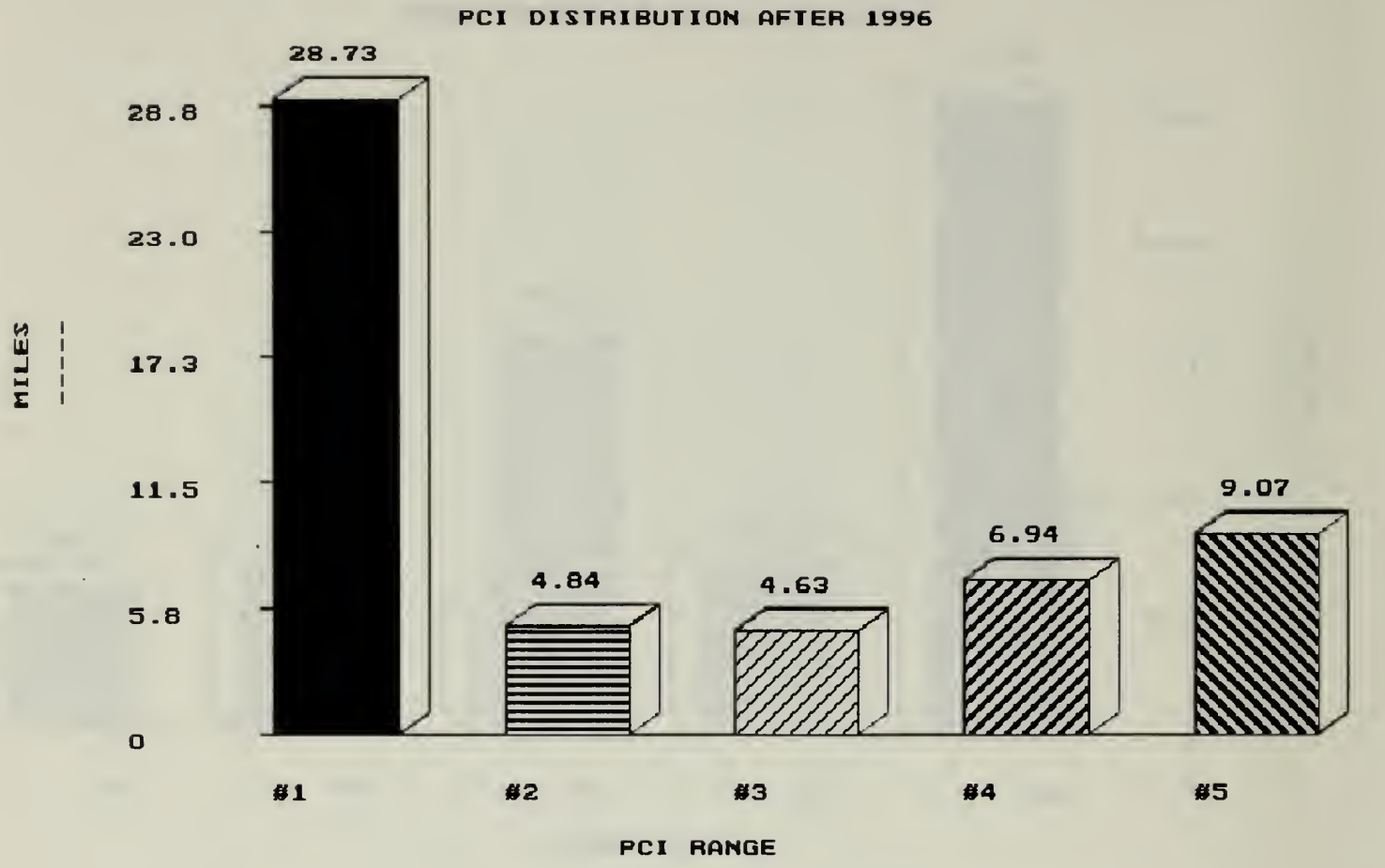
SOUTHWICK


PCI DISTRIBUTION AFTER 1994
21.43
13.11
5.73
7.46
6.49
21.5
17.2
12.9
8.6
4.3
0
MILES
#1
#2
#3
#4
#5
PCI RANGE

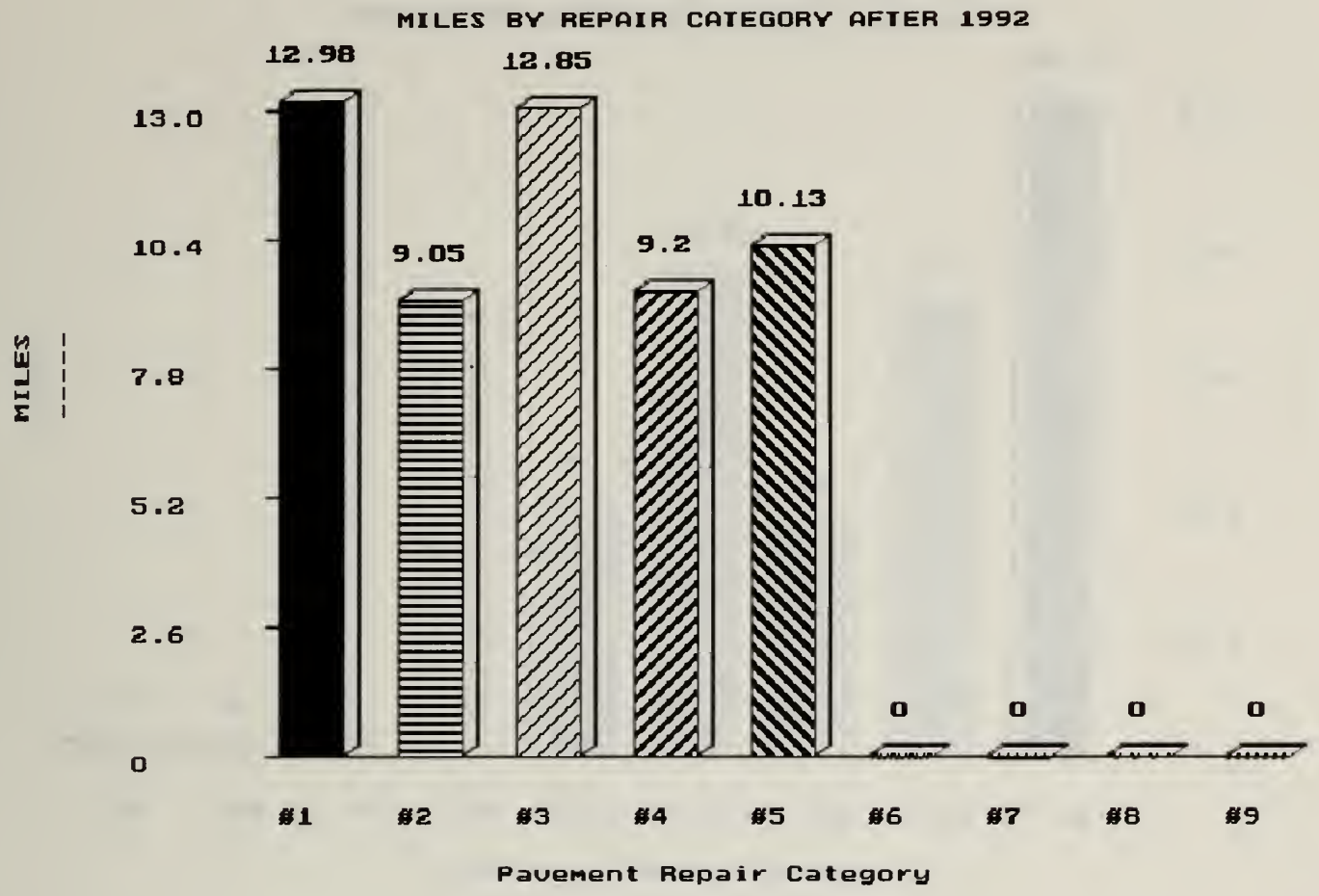
SOUTHWICK


PCI DISTRIBUTION AFTER 1995
28.4
28.5
22.8
17.1
11.4
5.7
0
MILES
7.45
5.12
7.04
6.21
#1
#2
#3
#4
#5
PCI RANGE

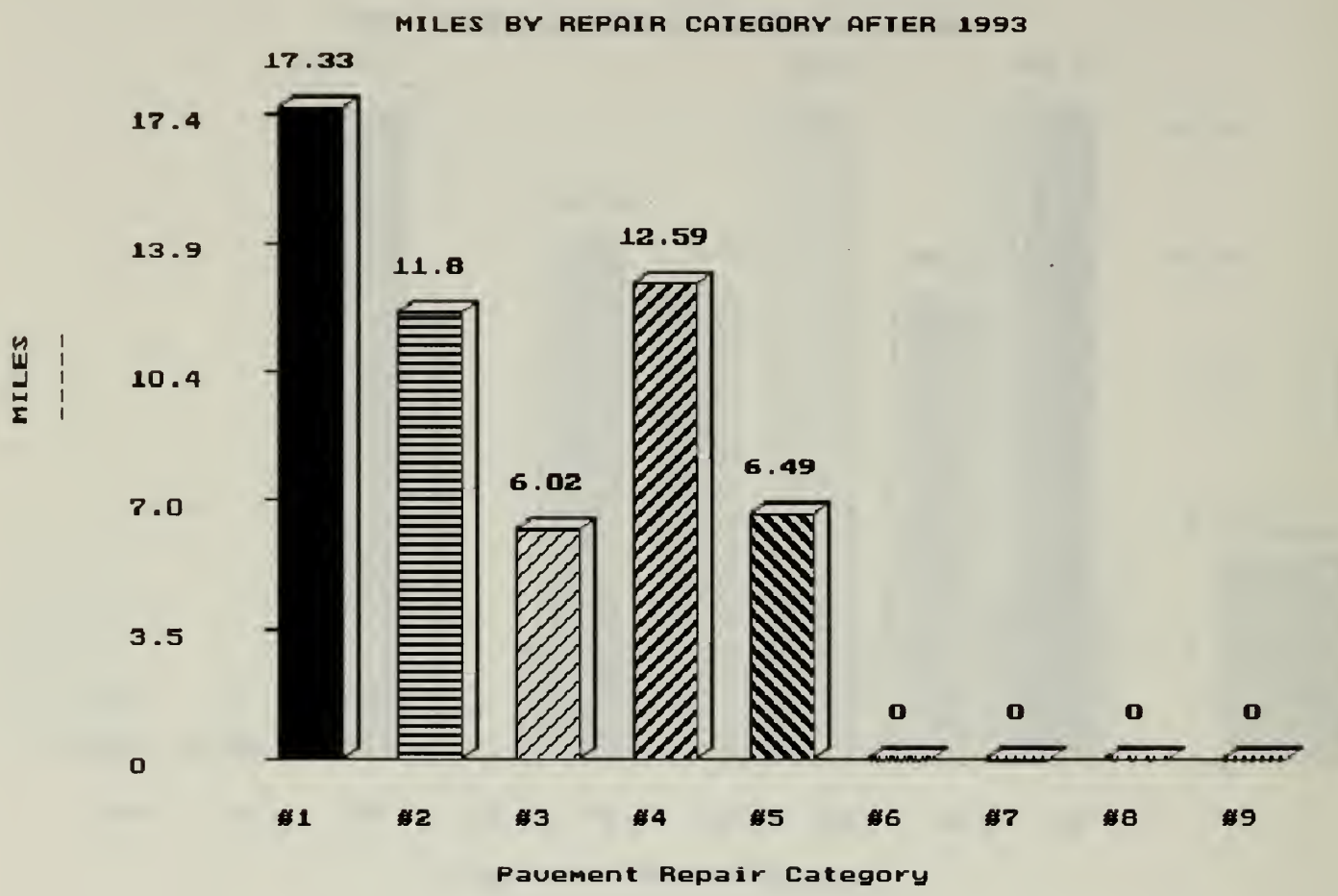
SOUTHWICK


PCI DISTRIBUTION AFTER 1996
28.73
28.8
23.0
17.3
11.5
5.8
0
MILES
4.84
4.63
6.94
9.07
#1
#2
#3
#4
#5
PCI RANGE

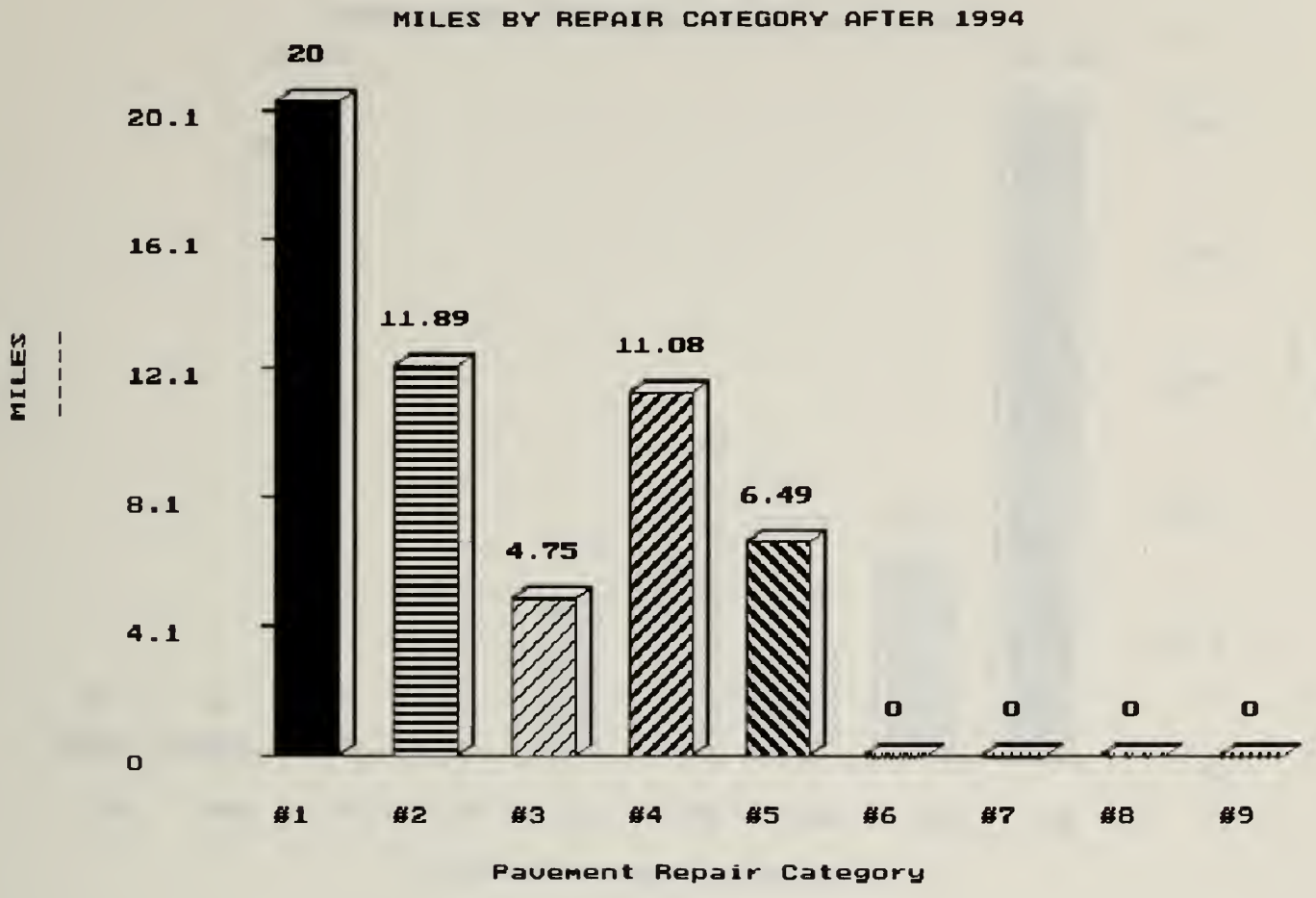
SOUTHWICK


MILES BY REPAIR CATEGORY AFTER 1992
12.98
12.85
10.13
9.2
9.05
13.0
10.4
7.8
5.2
2.6
0
MILES
0
0
0
0
#1
#2
#3
#4
#5
#6
#7
#8
#9
Pavement Repair Category

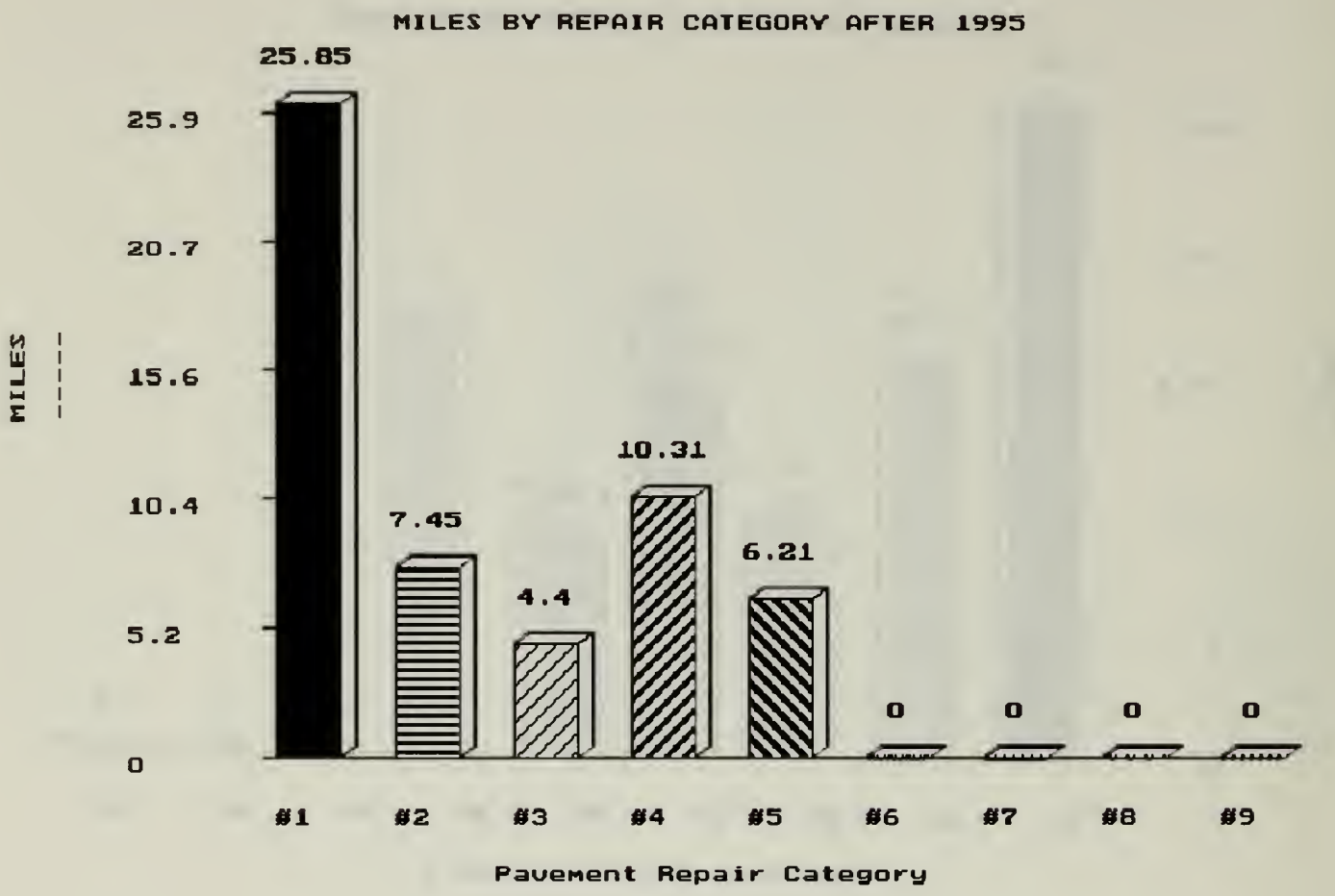
SOUTHWICK


MILES BY REPAIR CATEGORY AFTER 1993
MILES
17.4
13.9
10.4
7.0
3.5
0
17.33
11.8
6.02
12.59
6.49
0
0
0
0
#1
#2
#3
#4
#5
#6
#7
#8
#9
Pavement Repair Category

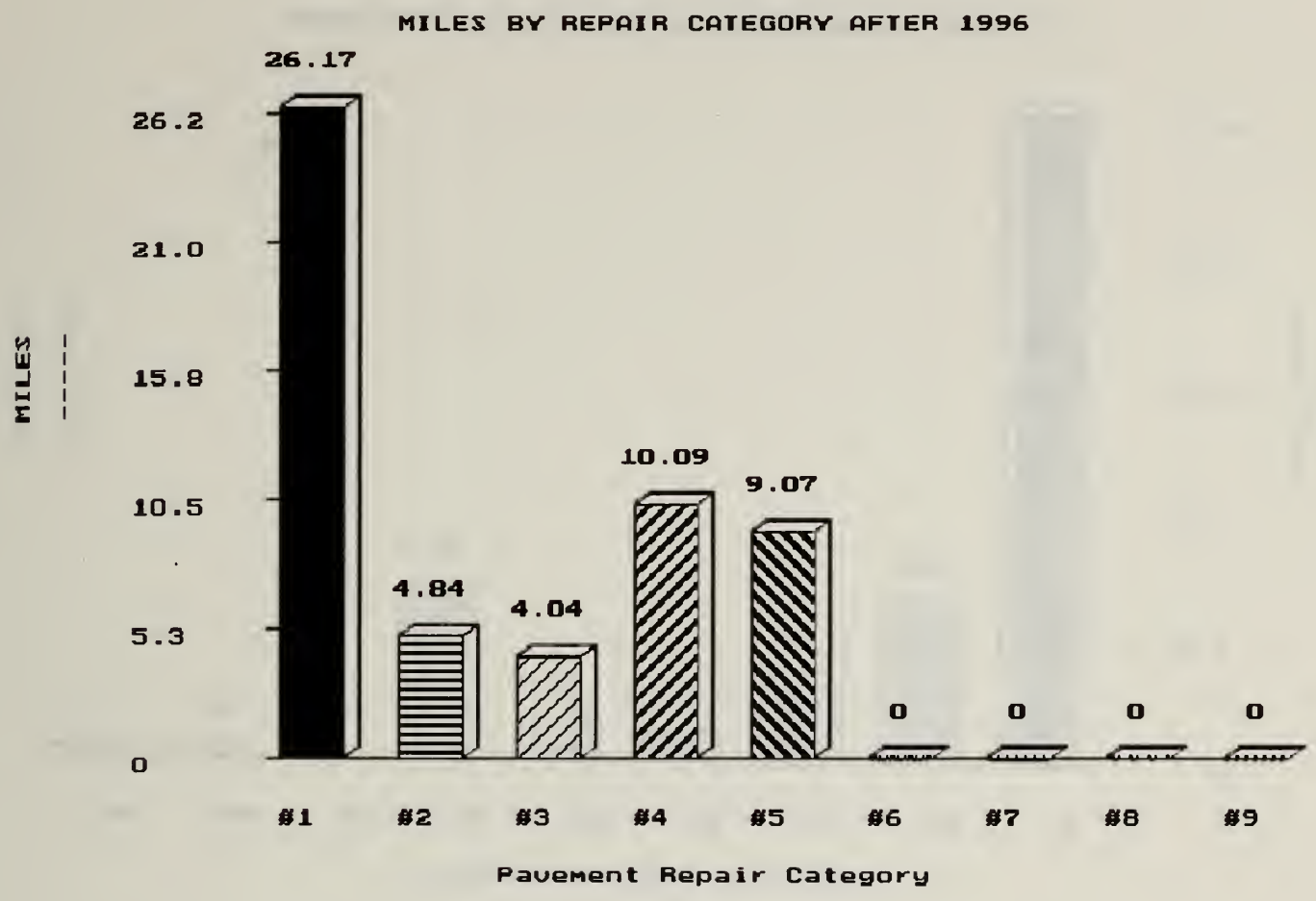
SOUTHWICK


MILES BY REPAIR CATEGORY AFTER 1994
MILES
20.1
16.1
12.1
8.1
4.1
0
20
11.89
4.75
11.08
6.49
0
0
0
0
#1
#2
#3
#4
#5
#6
#7
#8
#9
Pavement Repair Category

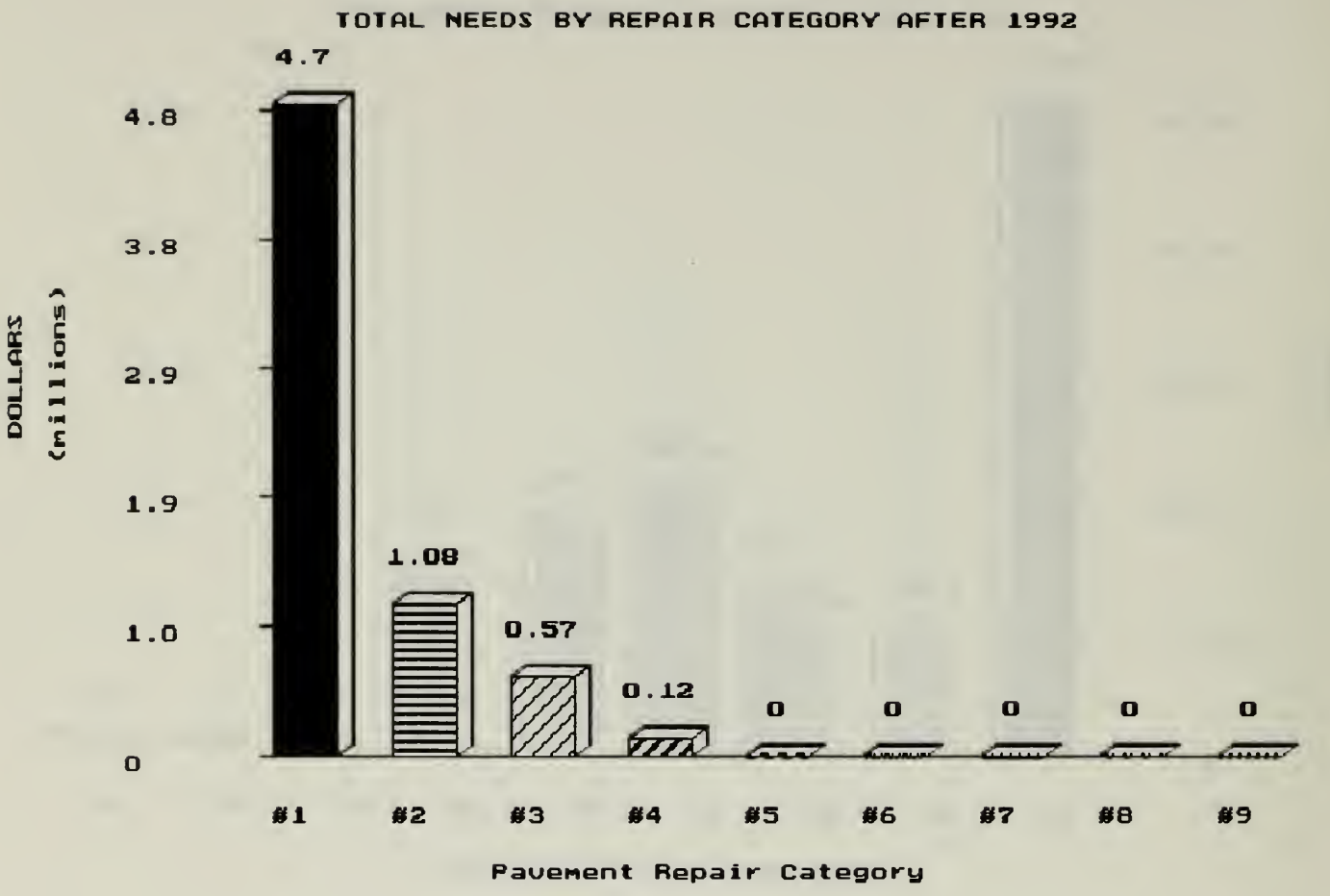
SOUTHWICK


MILES BY REPAIR CATEGORY AFTER 1995
MILES
25.9
20.7
15.6
10.4
5.2
0
25.85
7.45
4.4
10.31
6.21
0
0
0
0
#1
#2
#3
#4
#5
#6
#7
#8
#9
Pavement Repair Category

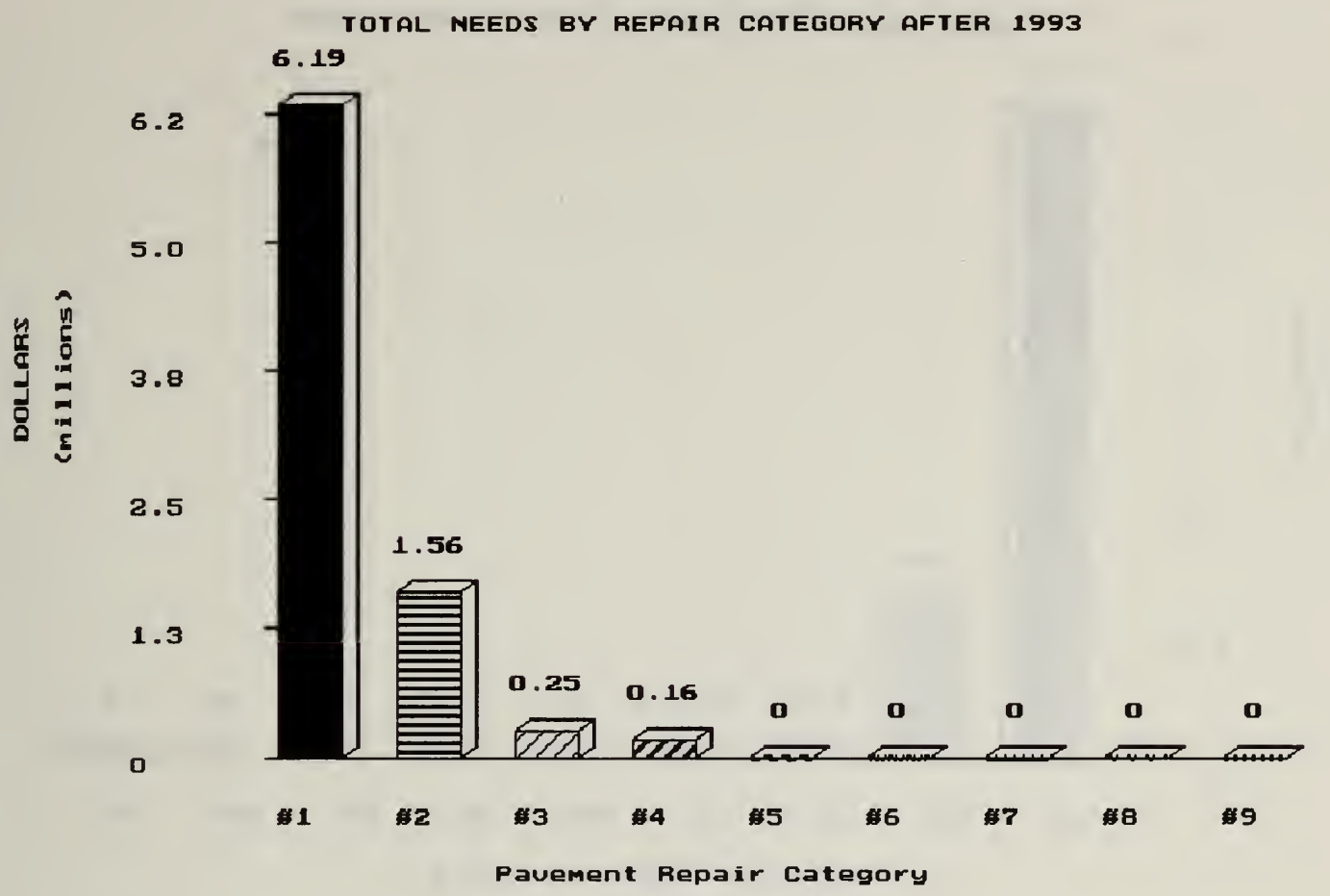
SOUTHWICK


MILES BY REPAIR CATEGORY AFTER 1996
MILES
26.17
26.2
21.0
15.8
10.09
9.07
10.5
4.84
4.04
5.3
0
0
0
0
0
#1
#2
#3
#4
#5
#6
#7
#8
#9
Pavement Repair Category

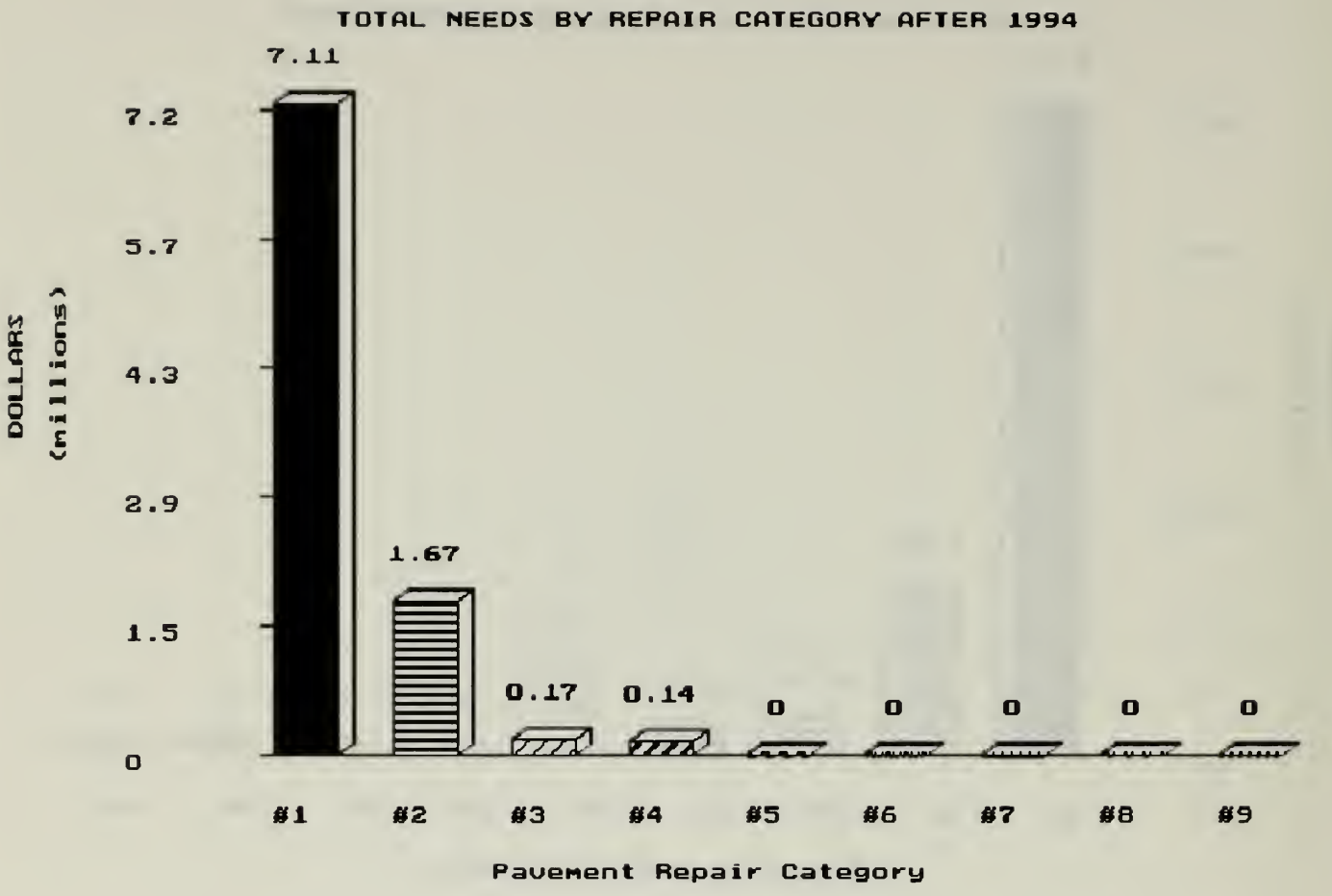
SOUTHWICK


TOTAL NEEDS BY REPAIR CATEGORY AFTER 1992
4.7
4.8
3.8
2.9
1.9
1.0
0
DOLLARS
(millions)
1.08
0.57
0.12
0
0
0
0
0
#1
#2
#3
#4
#5
#6
#7
#8
#9
Pavement Repair Category

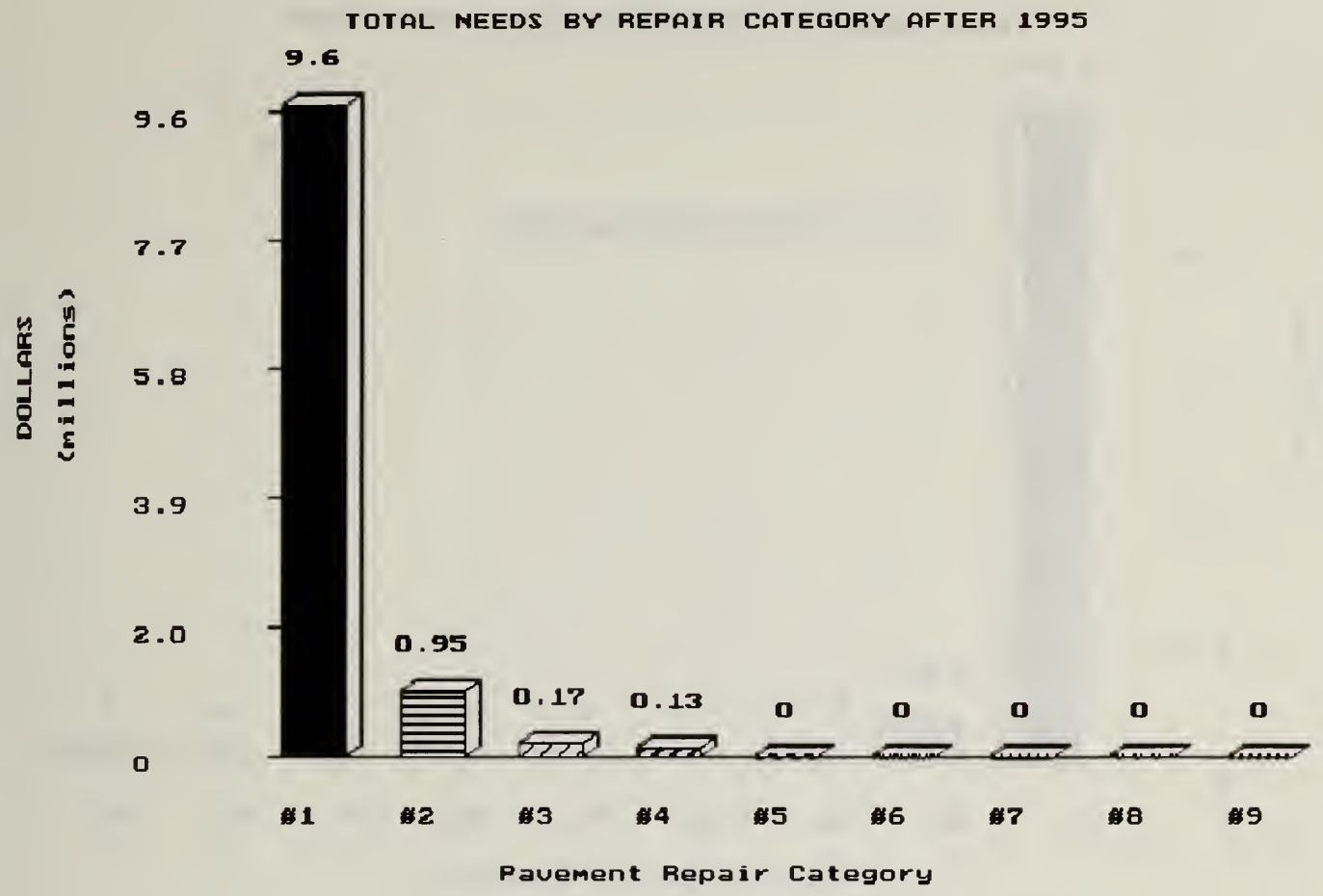
SOUTHWICK


TOTAL NEEDS BY REPAIR CATEGORY AFTER 1993
6.19
1.56
0.25
0.16
0
0
0
0
0
6.2
5.0
3.8
2.5
1.3
0
DOLLARS
(millions)
#1
#2
#3
#4
#5
#6
#7
#8
#9
Pavement Repair Category

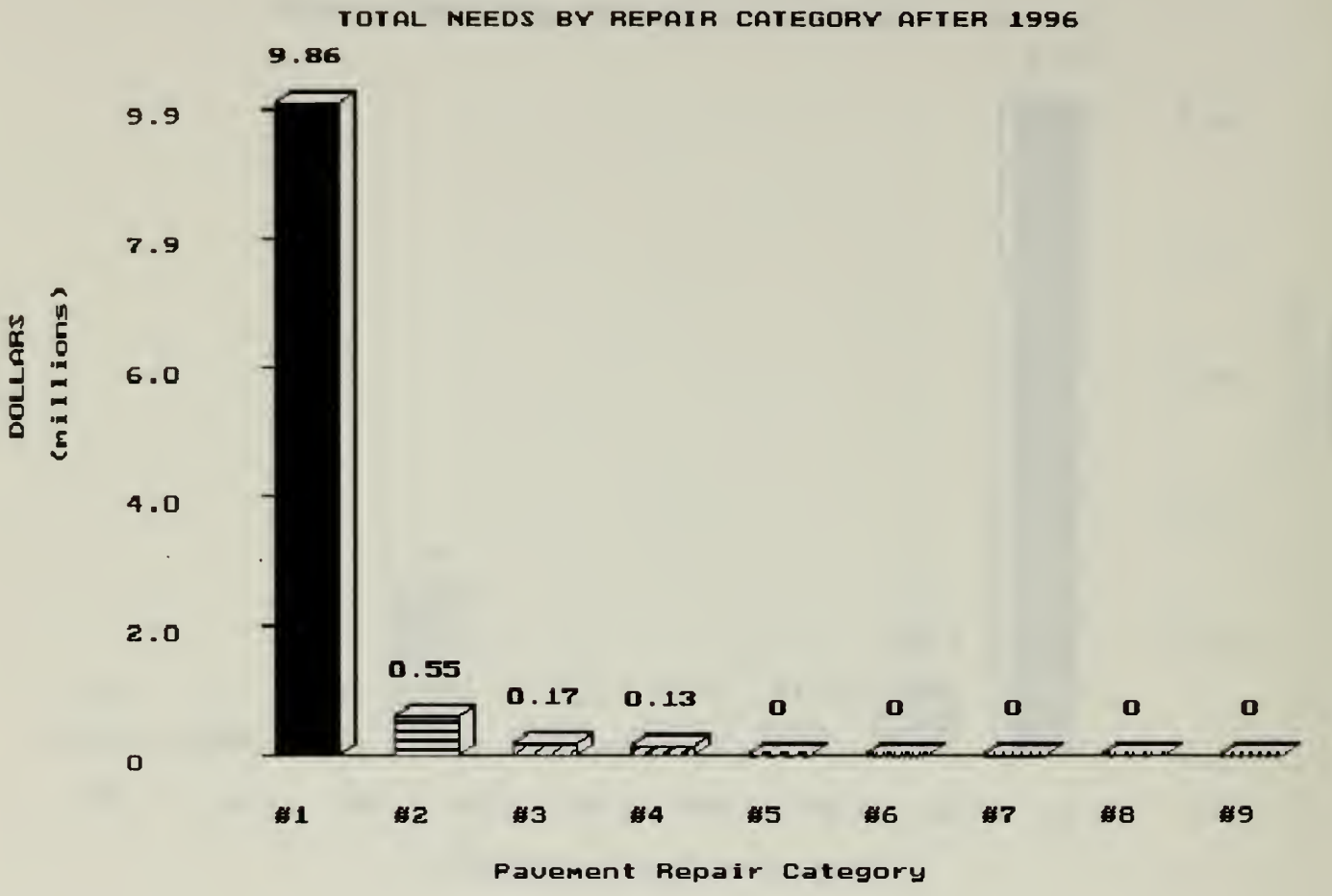
SOUTHWICK


TOTAL NEEDS BY REPAIR CATEGORY AFTER 1994
7.11
1.67
0.17
0.14
0
0
0
0
0
7.2
5.7
4.3
2.9
1.5
0
DOLLARS
(millions)
#1
#2
#3
#4
#5
#6
#7
#8
#9
Pavement Repair Category

SOUTHWICK


TOTAL NEEDS BY REPAIR CATEGORY AFTER 1995
9.6
9.6
7.7
5.8
3.9
2.0
0
DOLLARS (millions)
0.95
0.17
0.13
0
0
0
0
0
#1
#2
#3
#4
#5
#6
#7
#8
#9
Pavement Repair Category

SOUTHWICK


TOTAL NEEDS BY REPAIR CATEGORY AFTER 1996
9.86
0.55
0.17
0.13
0
0
0
0
0
9.9
7.9
6.0
4.0
2.0
0
DOLLARS
(millions)
#1
#2
#3
#4
#5
#6
#7
#8
#9
Pavement Repair Category

Budget to maintain present PCI level

SOUTHWICK
Plan Budget Input Data
11/03/92

Available Budget For
Asphalt Pavement Improvements

Begin Plan in Year: 1992
Use Inflation Rate: 5.00 %

	R E P A I R S									
Year	# 1	# 2	# 3	# 4	# 5	# 6	# 7	# 8	# 9	Total
1992	$ 0	$ 0	$ 75	$ 45	$ 0	$ 0	$ 0	$ 0	$ 0	$ 120
1993	$ 0	$ 0	$ 80	$ 70	$ 0	$ 0	$ 0	$ 0	$ 0	$ 150
1994	$ 0	$ 0	$ 110	$ 45	$ 0	$ 0	$ 0	$ 0	$ 0	$ 155
1995	$ 0	$ 95	$ 60	$ 25	$ 0	$ 0	$ 0	$ 0	$ 0	$ 180
1996	$ 0	$ 190	$ 20	$ 40	$ 0	$ 0	$ 0	$ 0	$ 0	$ 250
1997	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0
1998	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0
1999	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0
2000	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0
2001	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0
2002	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0
2003	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0
2004	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0
2005	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0
2006	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0
2007	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0
2008	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0
2009	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0
2010	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0
2011	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0
Total	$ 0	$ 285	$ 345	$ 225	$ 0	$ 0	$ 0	$ 0	$ 0	$ 855

FUTURE CONDITION PROJECTION REPORT
BASED ON PCI

After Year - 1992

PCI Range:	1	2	3	4	5	Average PCI =	75
Miles	11.5	12.6	10.7	4.1	15.4		

Repair Number:	1	2	3	4	5	6	7	8	9	Total
Miles	13	9	11	7	15	0	0	0	0	54
Thousand Dollars	4704	1004	468	85	0	0	0	0	0	6261

After Year - 1993

PCI Range:	1	2	3	4	5	Average PCI =	75
Miles	18.6	9.5	3.3	4.1	18.8		

Repair Number:	1	2	3	4	5	6	7	8	9	Total
Miles	17	9	4	5	19	0	0	0	0	54
Thousand Dollars	6185	1219	153	69	0	0	0	0	0	7626

After Year - 1994

PCI Range:	1	2	3	4	5	Average PCI =	75
Miles	20.9	7.5	0.1	1.4	24.3		

Repair Number:	1	2	3	4	5	6	7	8	9	Total
Miles	19	7	2	1	24	0	0	0	0	54
Thousand Dollars	6905	994	66	21	0	0	0	0	0	7985

After Year - 1995

PCI Range:	1	2	3	4	5	Average PCI =	75
Miles	24.3	2.3	0.0	4.0	23.6		

Repair Number:	1	2	3	4	5	6	7	8	9	Total
Miles	23	3	0	4	24	0	0	0	0	54
Thousand Dollars	8462	368	21	57	0	0	0	0	0	8908

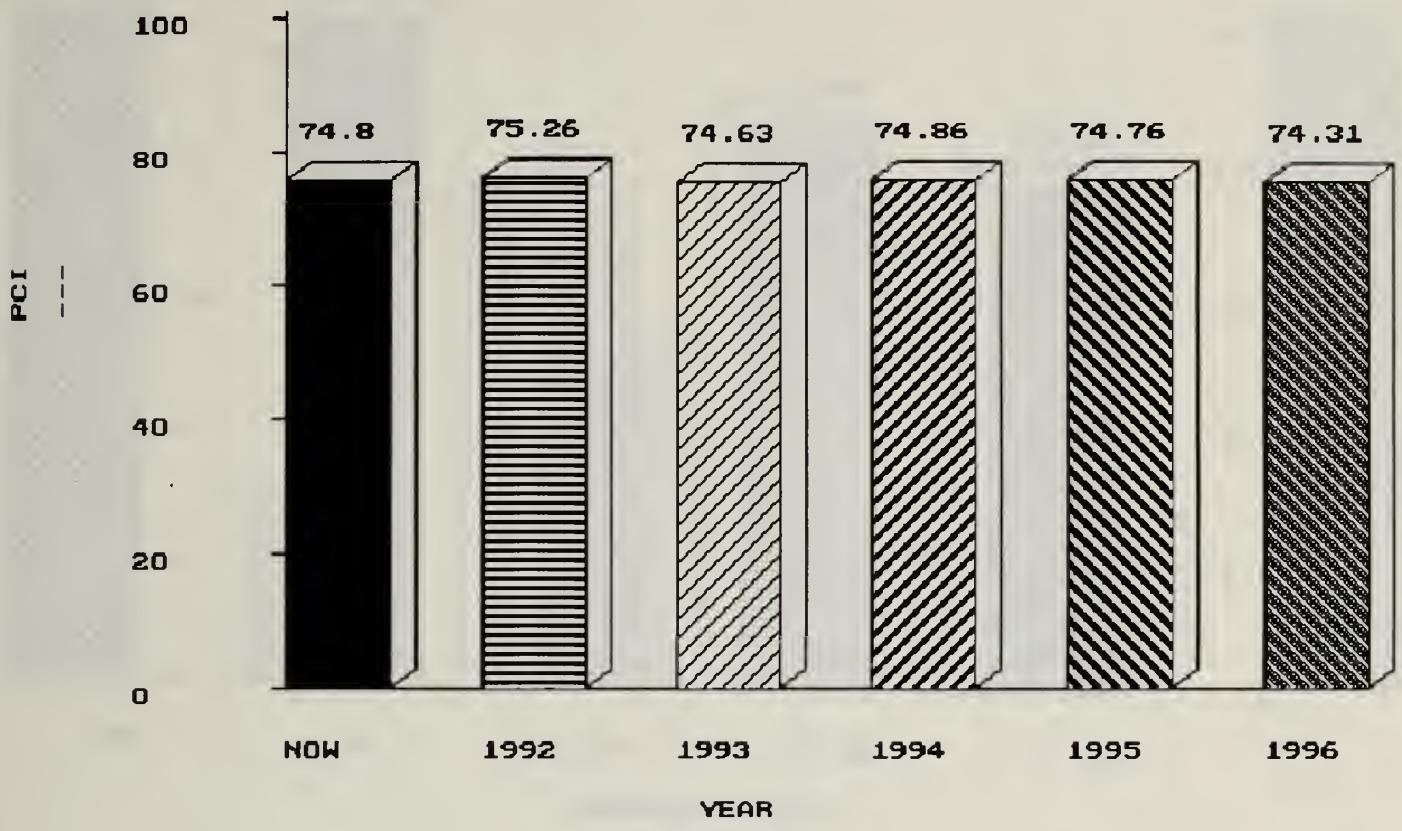
After Year - 1996

PCI Range:	1	2	3	4	5	Average PCI =	74
Miles	23.8	1.1	0.0	10.2	19.1		

Repair Number:	1	2	3	4	5	6	7	8	9	Total
Miles	23	2	0	10	19	0	0	0	0	54
Thousand Dollars	8462	213	0	132	0	0	0	0	0	8806

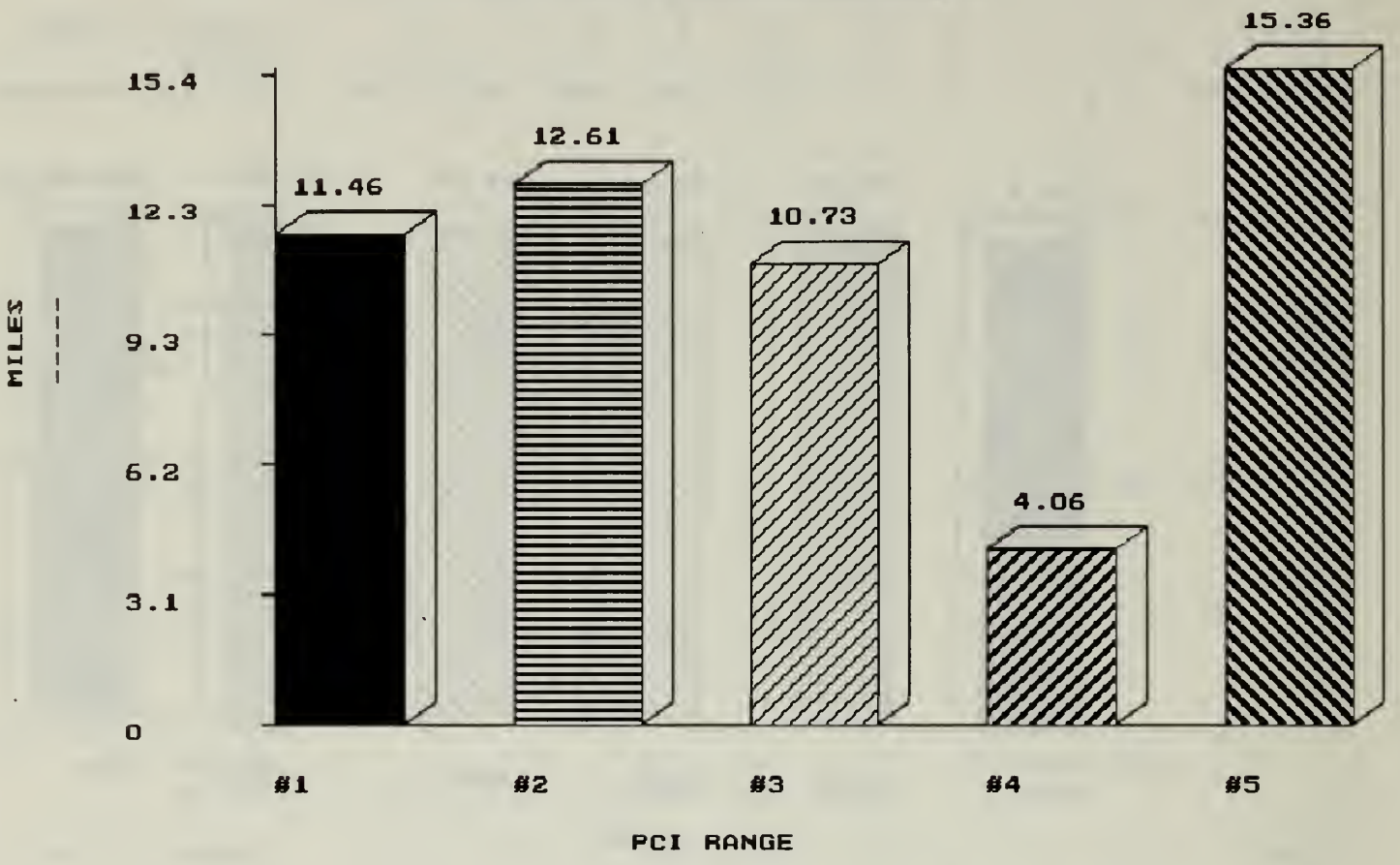
SOUTHWICK

ESTIMATED AVERAGE FUTURE PCI VALUES

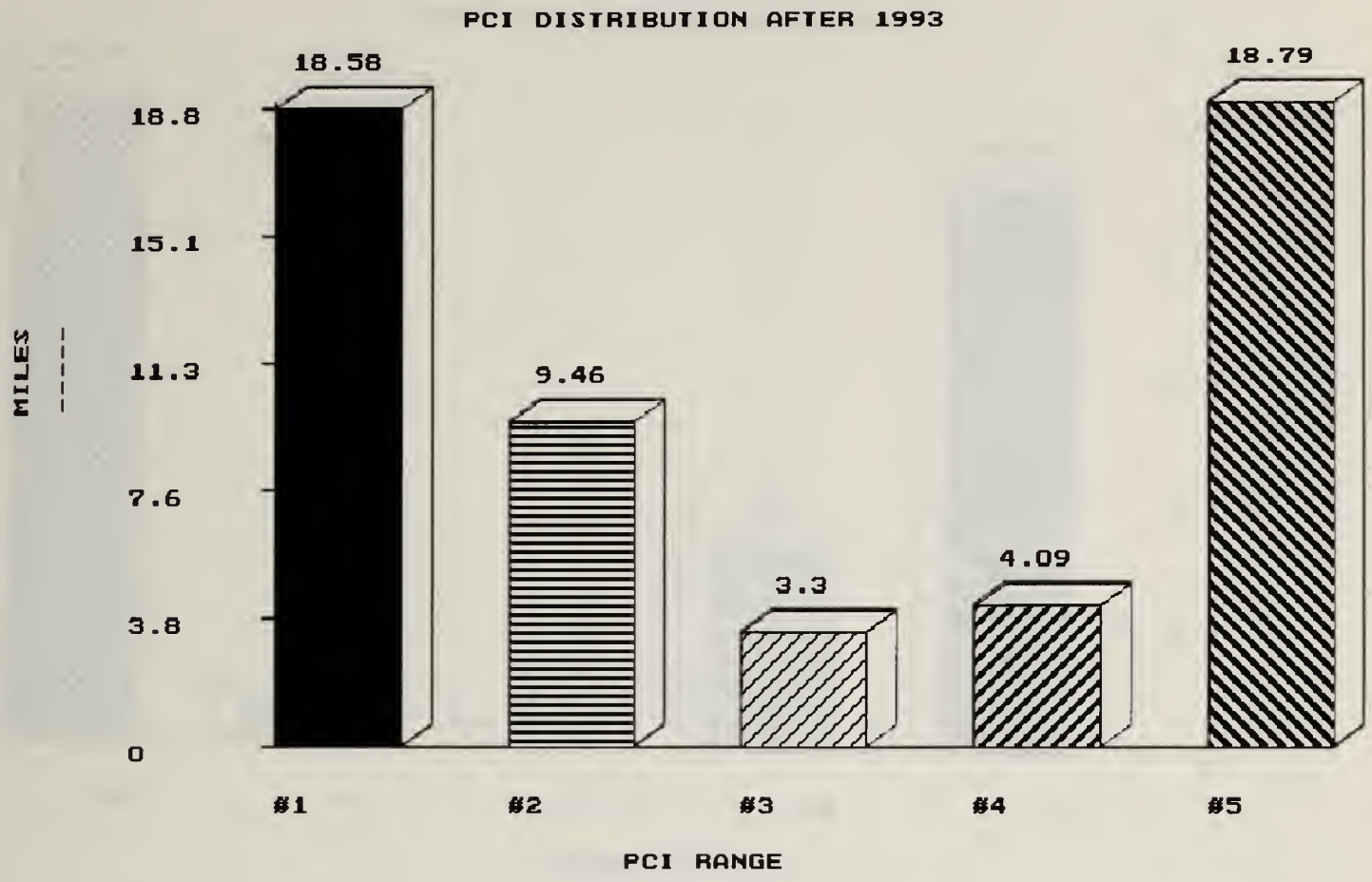


SOUTHWICK

PCI DISTRIBUTION AFTER 1992

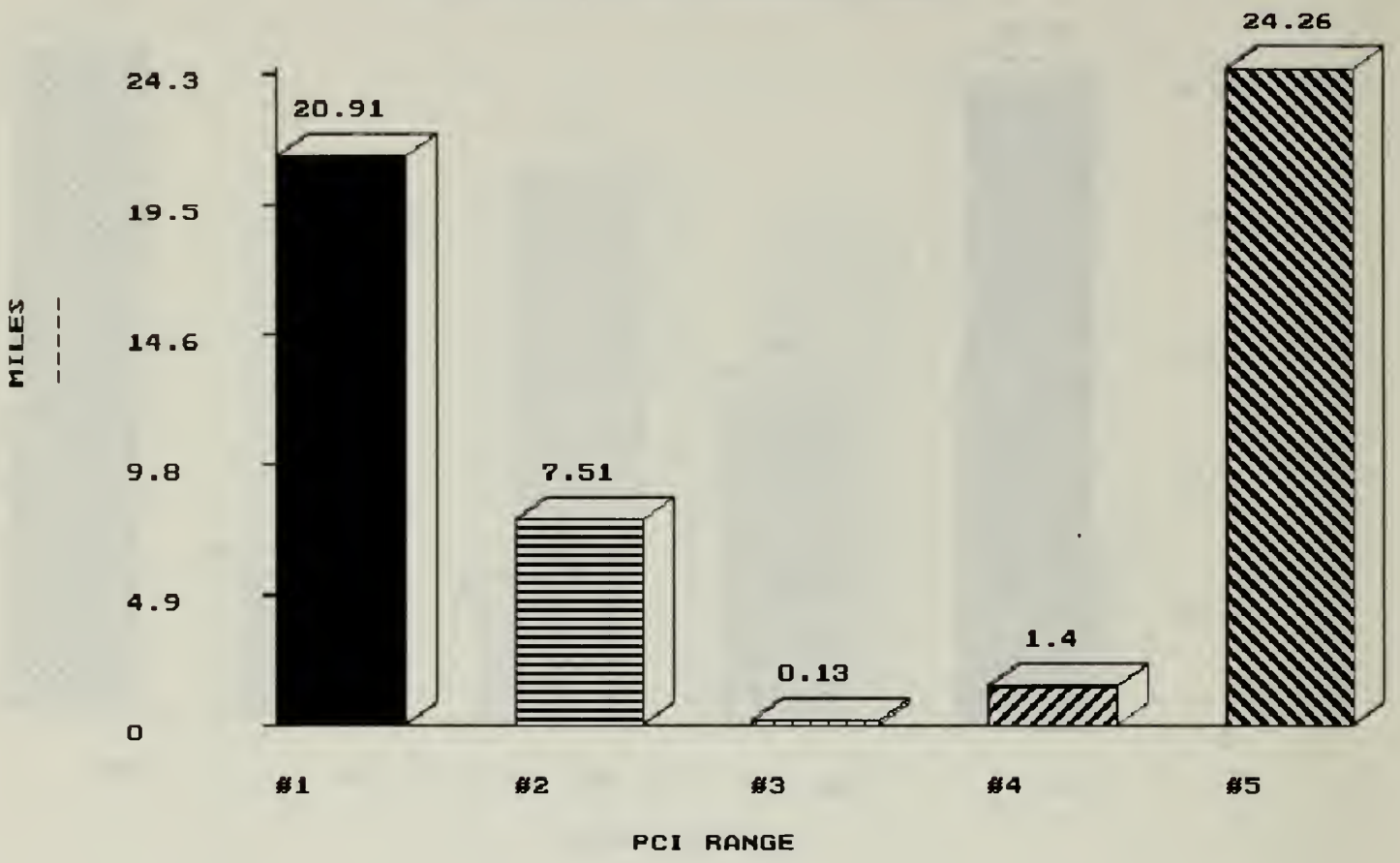


SOUTHWICK


PCI DISTRIBUTION AFTER 1993
18.58
18.79
9.46
3.3
4.09
18.8
15.1
11.3
7.6
3.8
0
MILES
#1
#2
#3
#4
#5
PCI RANGE

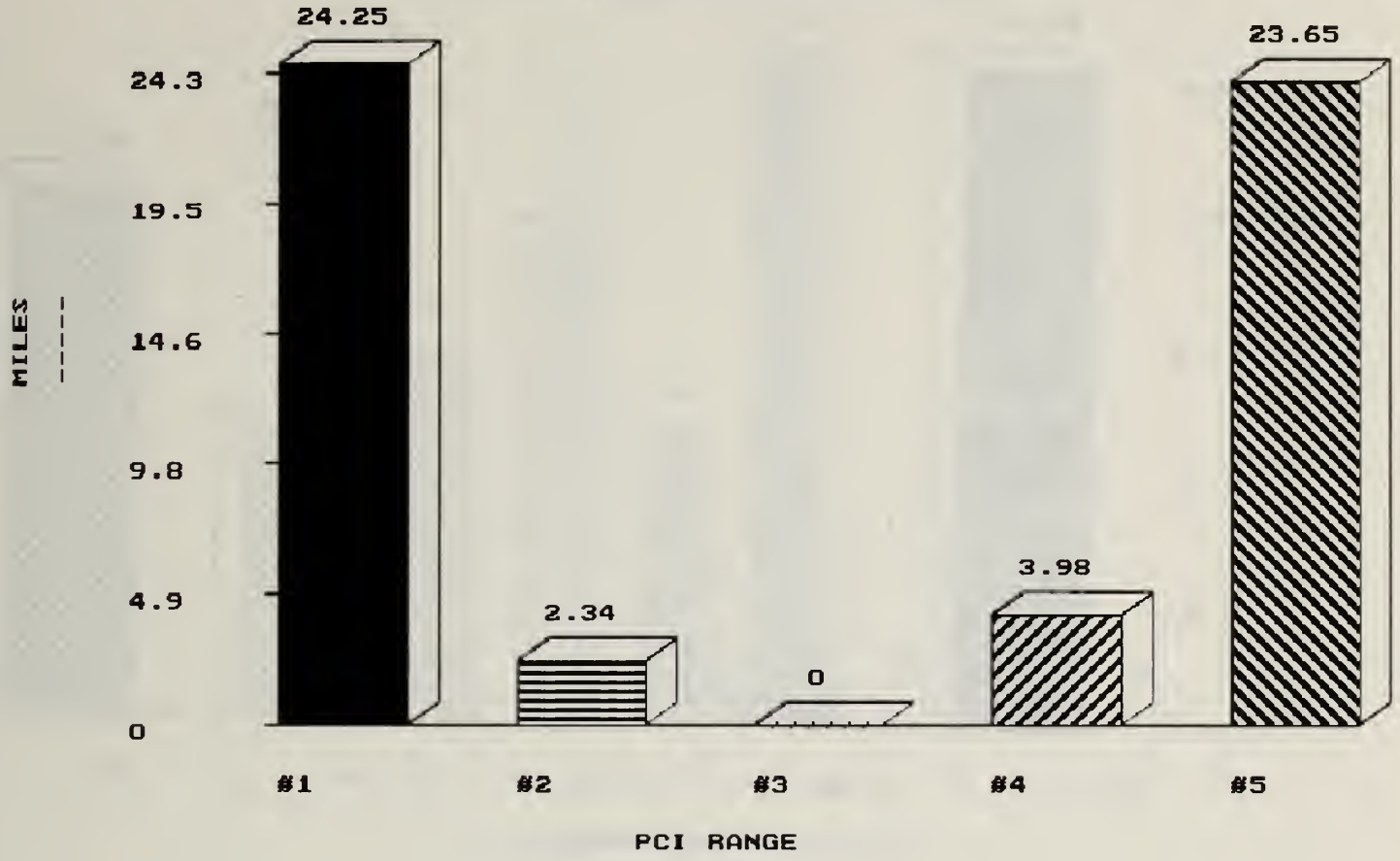
SOUTHWICK

PCI DISTRIBUTION AFTER 1994



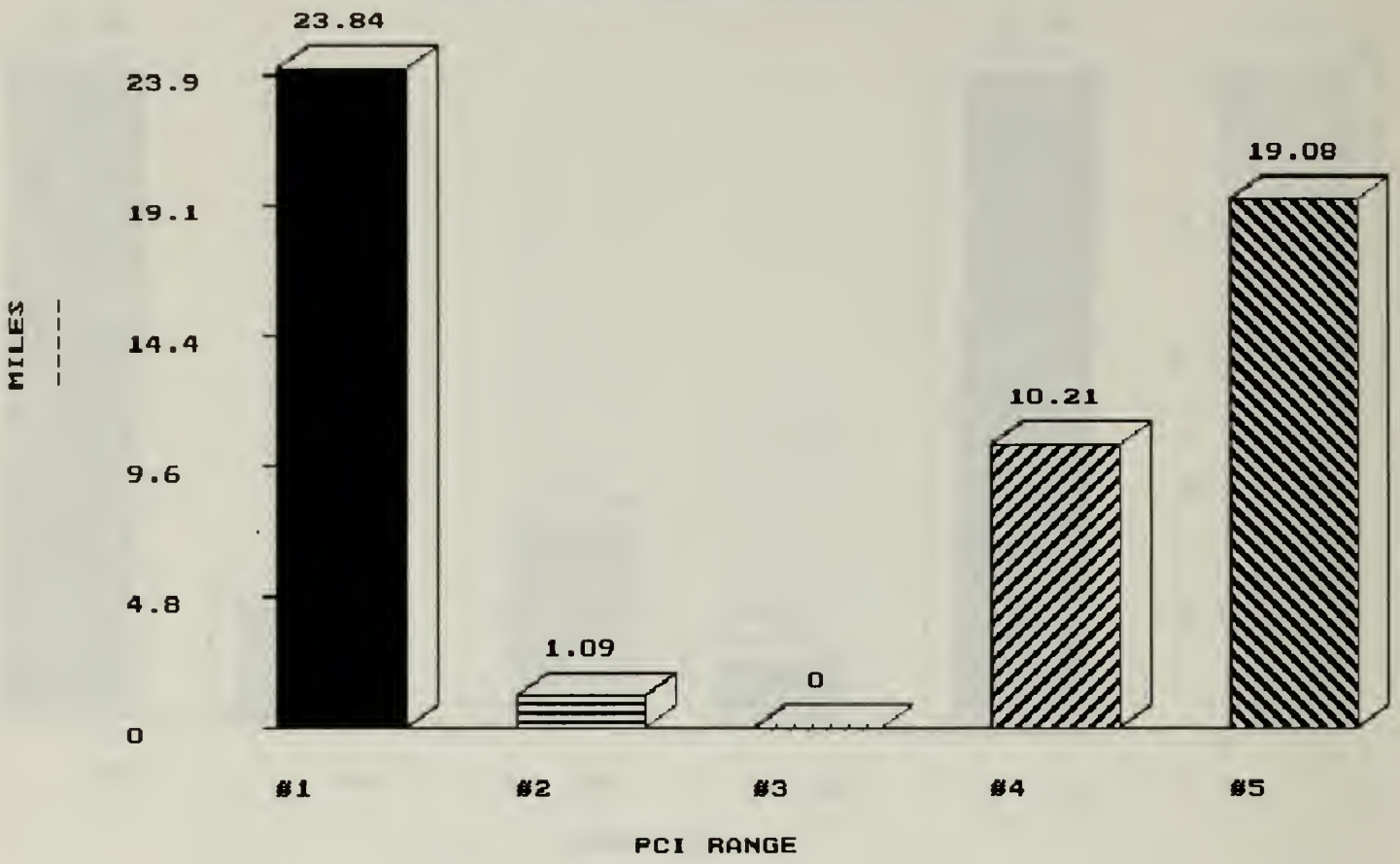
SOUTHWICK

PCI DISTRIBUTION AFTER 1995

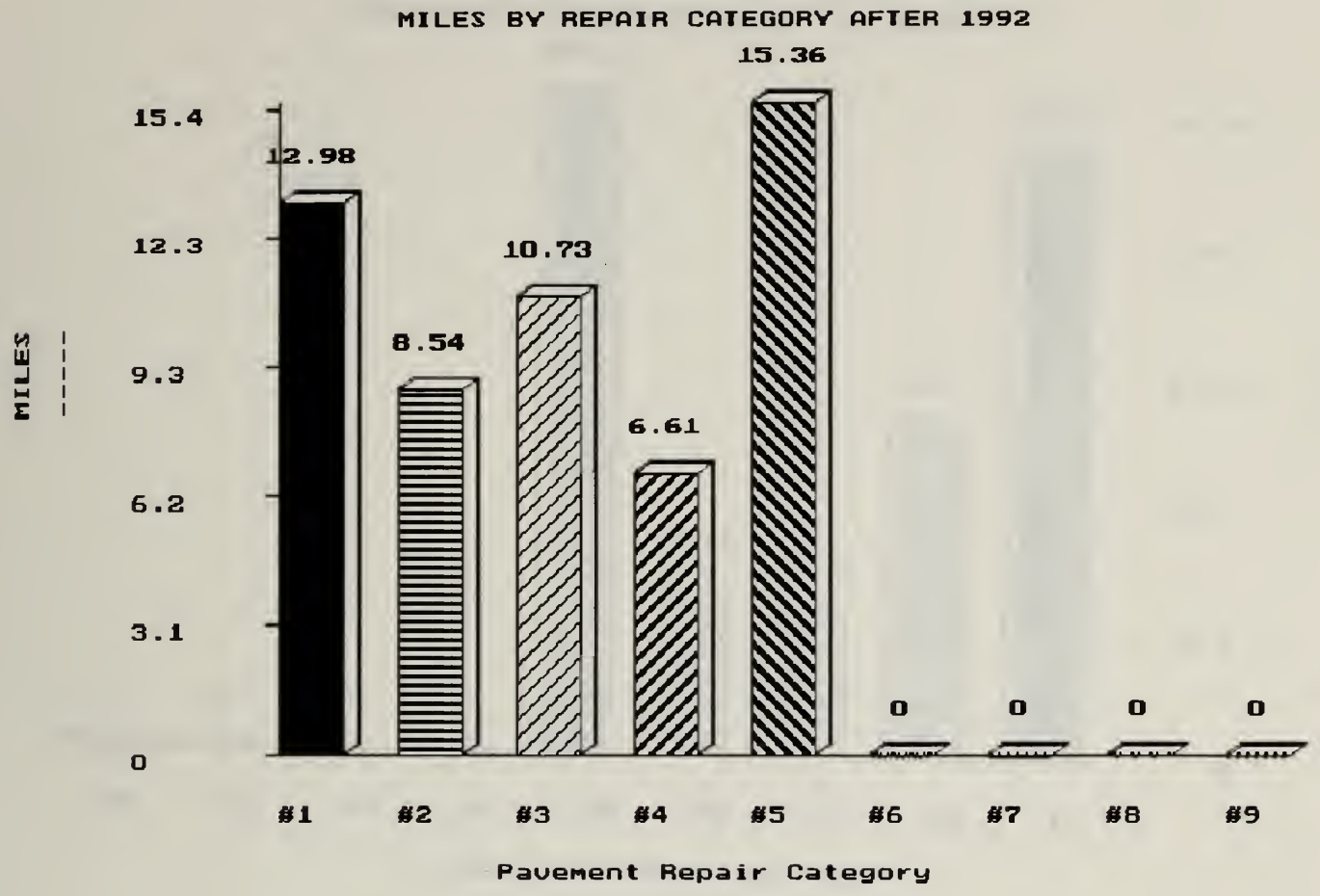


SOUTHWICK

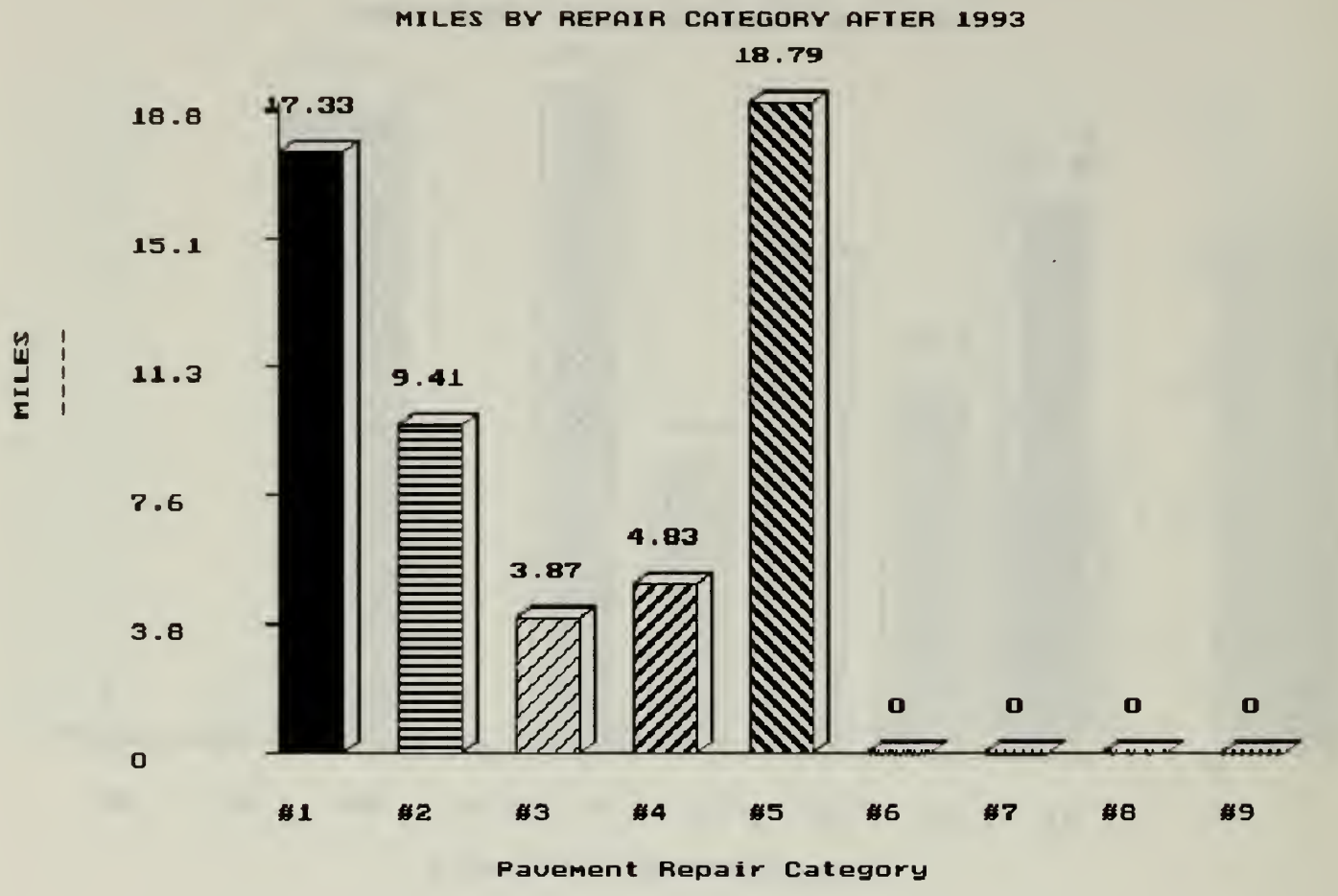
PCI DISTRIBUTION AFTER 1996



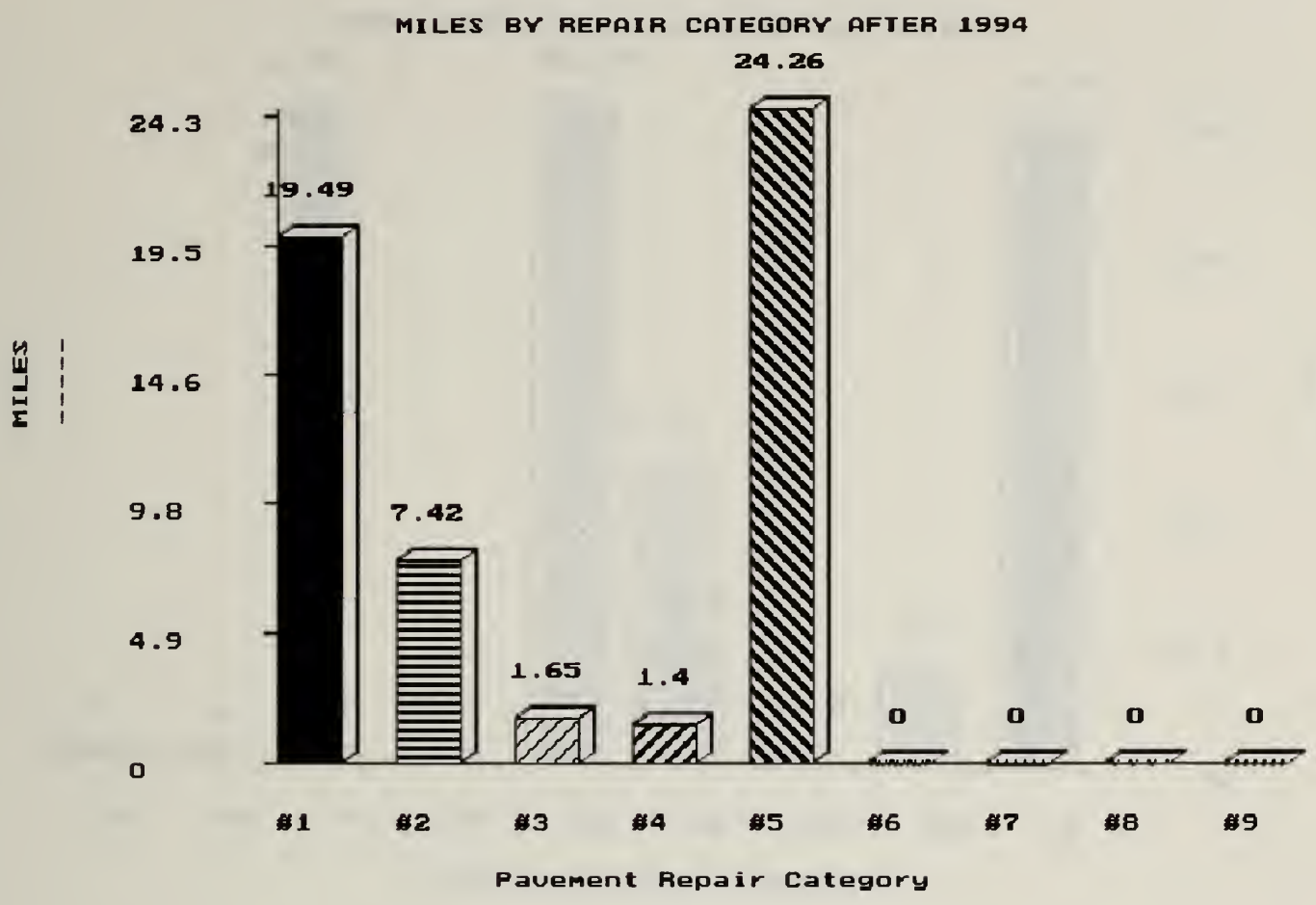
SOUTHWICK


MILES BY REPAIR CATEGORY AFTER 1992
MILES
15.4
12.3
9.3
6.2
3.1
0
12.98
8.54
10.73
6.61
15.36
0
0
0
0
#1
#2
#3
#4
#5
#6
#7
#8
#9
Pavement Repair Category

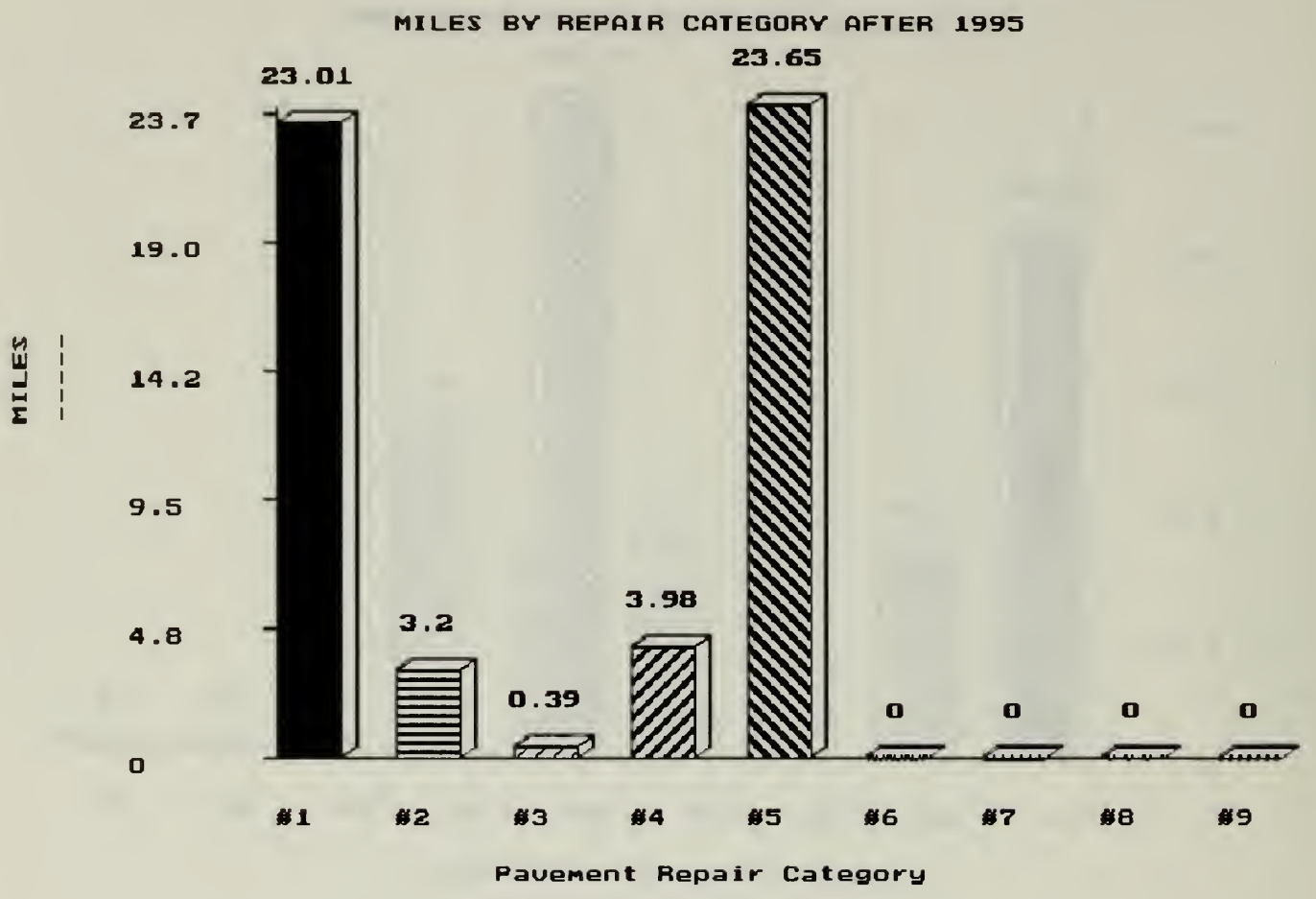
SOUTHWICK


MILES BY REPAIR CATEGORY AFTER 1993
MILES
18.8
15.1
11.3
7.6
3.8
0
17.33
9.41
3.87
4.83
18.79
0
0
0
0
#1
#2
#3
#4
#5
#6
#7
#8
#9
Pavement Repair Category

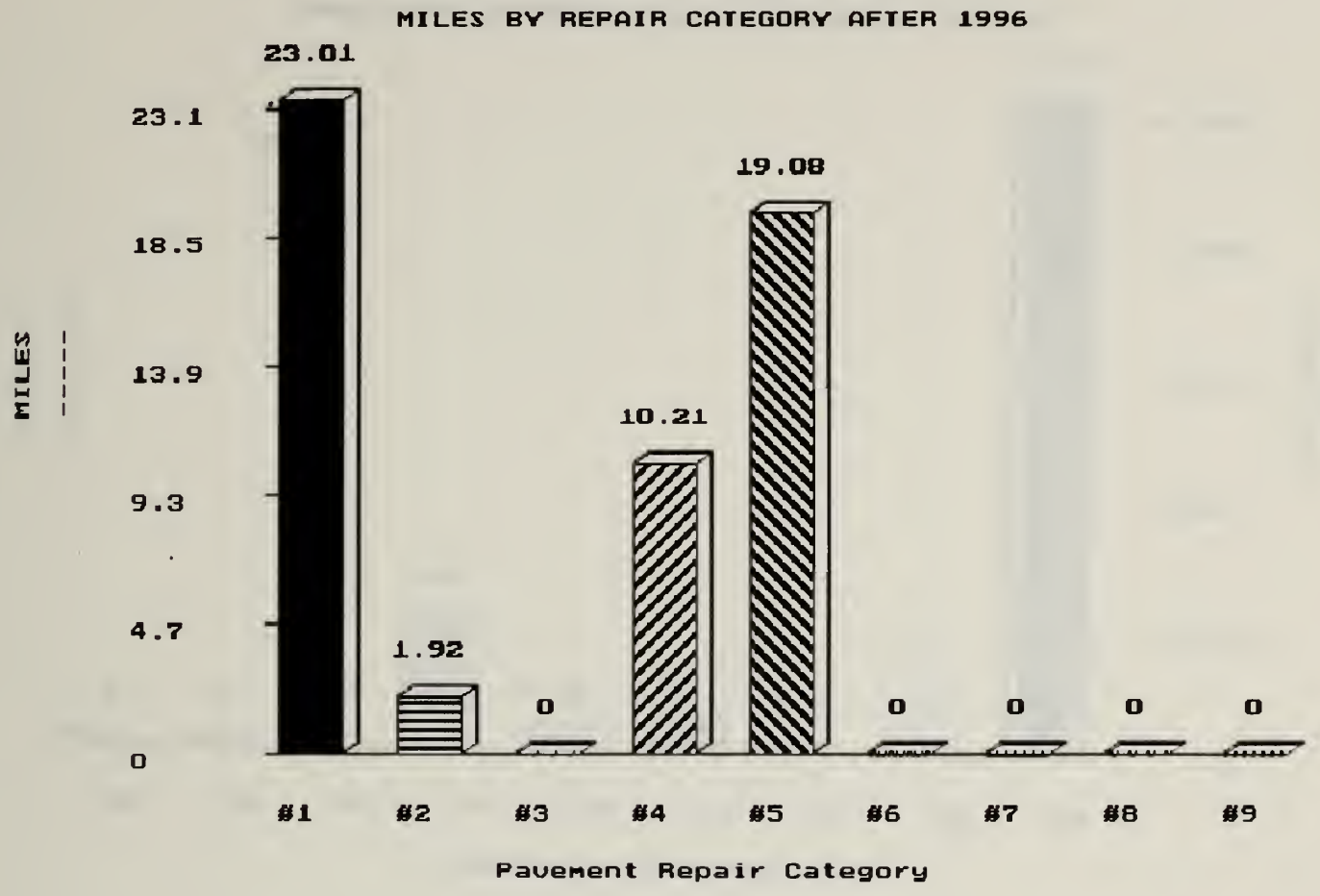
SOUTHWICK


MILES BY REPAIR CATEGORY AFTER 1994
24.26
24.3
19.49
19.5
14.6
9.8
7.42
4.9
1.65
1.4
0
0
0
0
0
MILES
#1
#2
#3
#4
#5
#6
#7
#8
#9
Pavement Repair Category

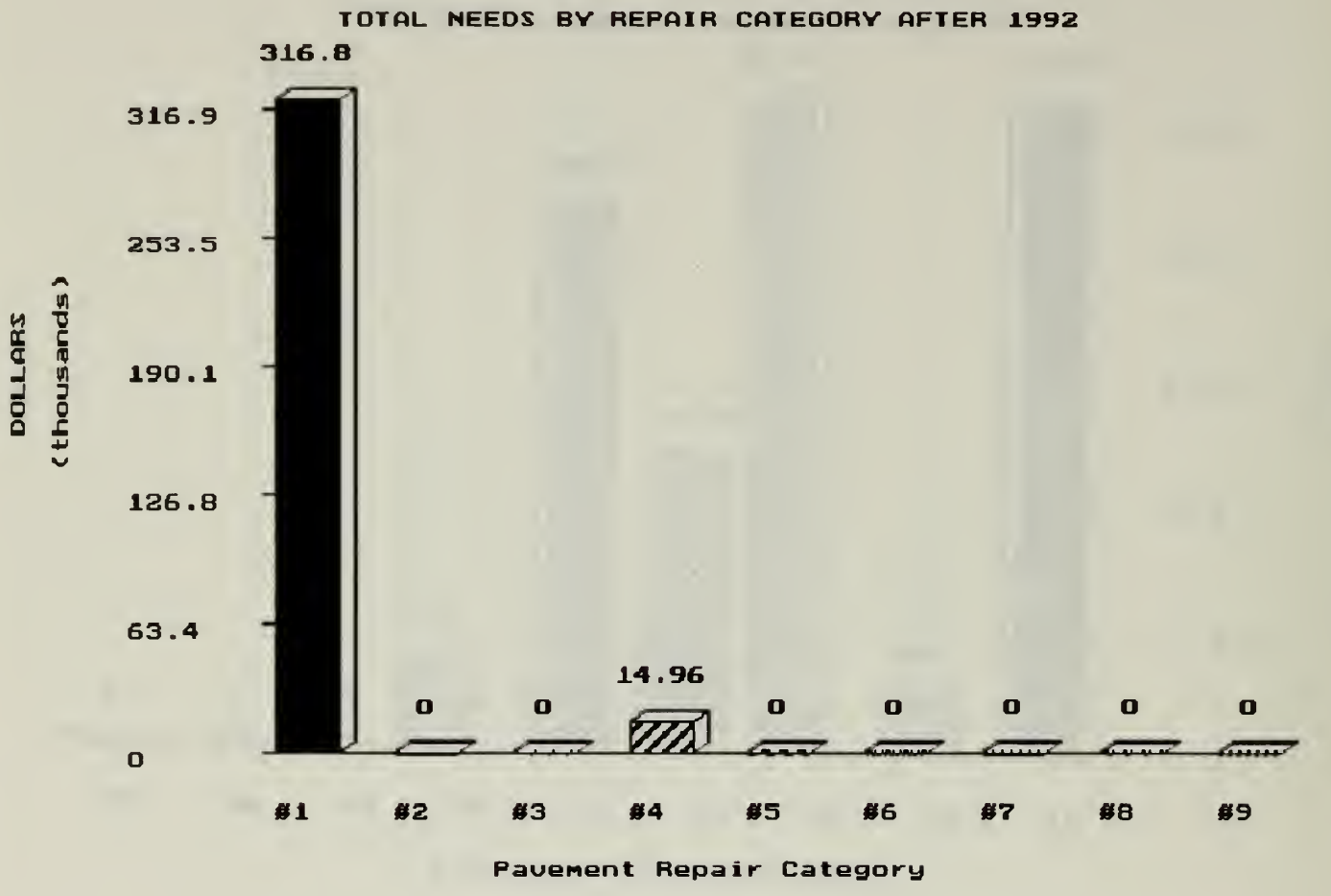
SOUTHWICK


MILES BY REPAIR CATEGORY AFTER 1995
MILES
23.7
19.0
14.2
9.5
4.8
0
23.01
3.2
0.39
3.98
23.65
0
0
0
0
#1
#2
#3
#4
#5
#6
#7
#8
#9
Pavement Repair Category

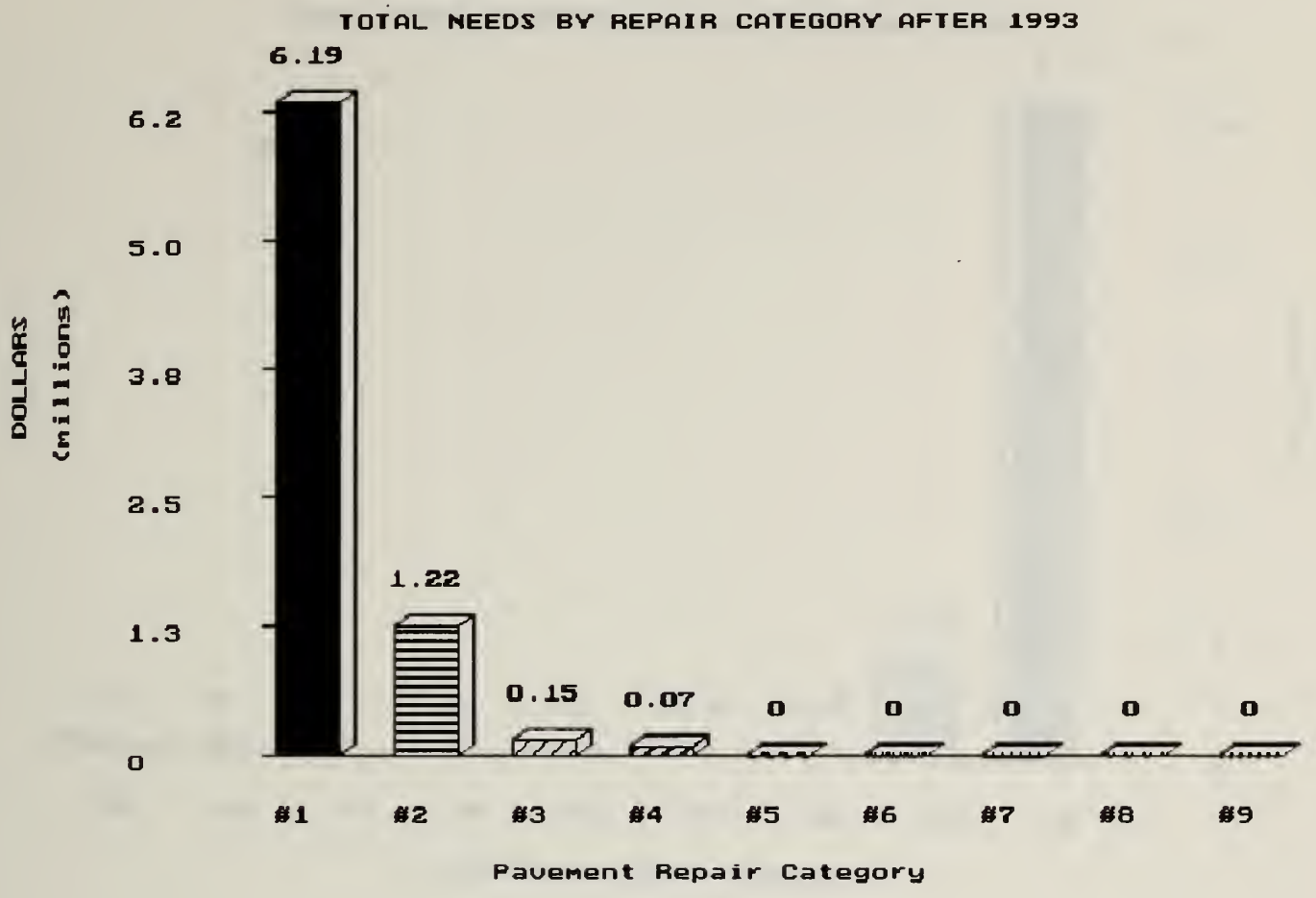
SOUTHWICK


MILES BY REPAIR CATEGORY AFTER 1996
MILES
23.1
18.5
13.9
9.3
4.7
0
23.01
1.92
0
10.21
19.08
0
0
0
0
#1
#2
#3
#4
#5
#6
#7
#8
#9
Pavement Repair Category

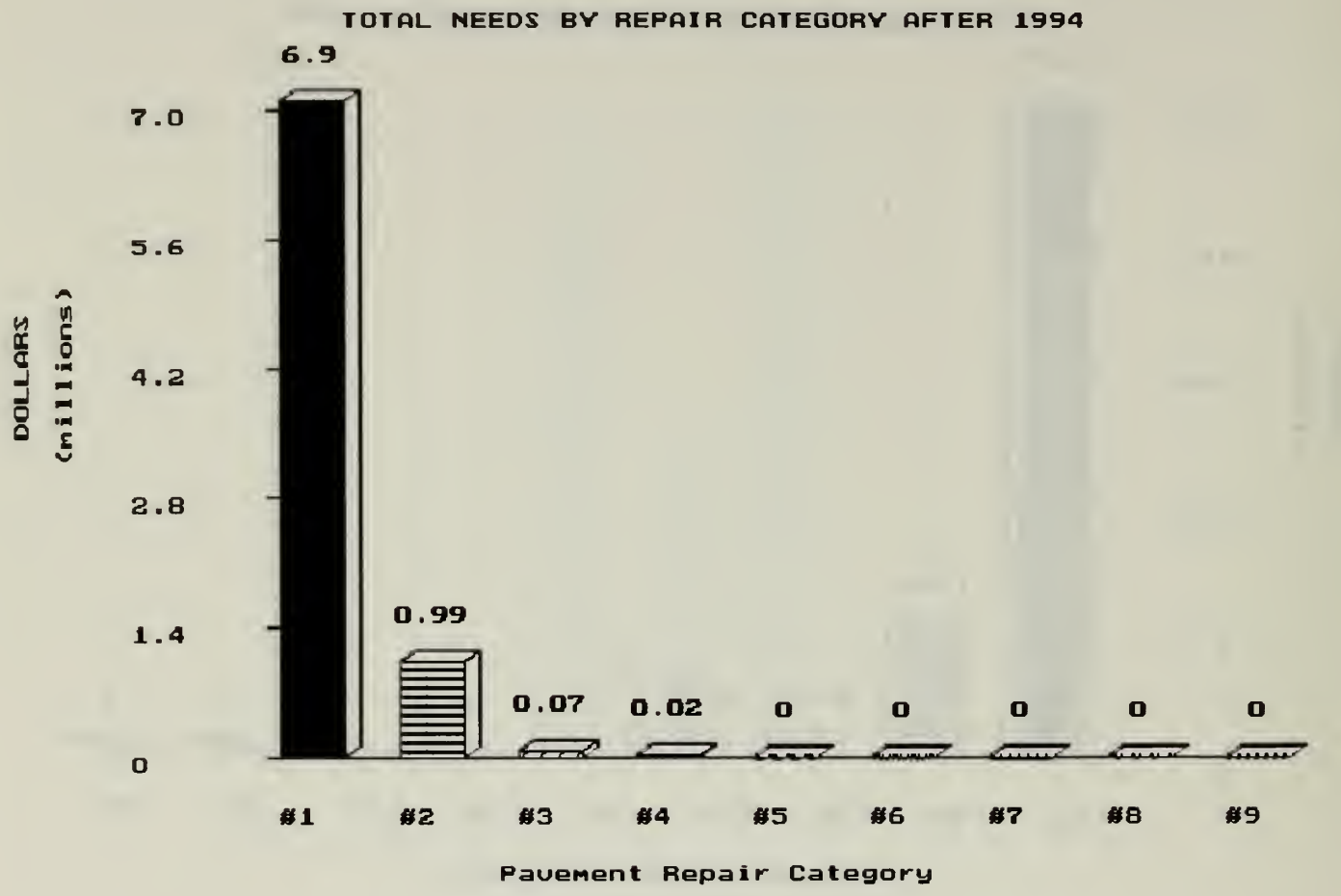
SOUTHWICK


TOTAL NEEDS BY REPAIR CATEGORY AFTER 1992
316.8
316.9
253.5
190.1
126.8
63.4
0
DOLLARS
(thousands)
14.96
0
0
0
0
0
0
0
#1
#2
#3
#4
#5
#6
#7
#8
#9
Pavement Repair Category

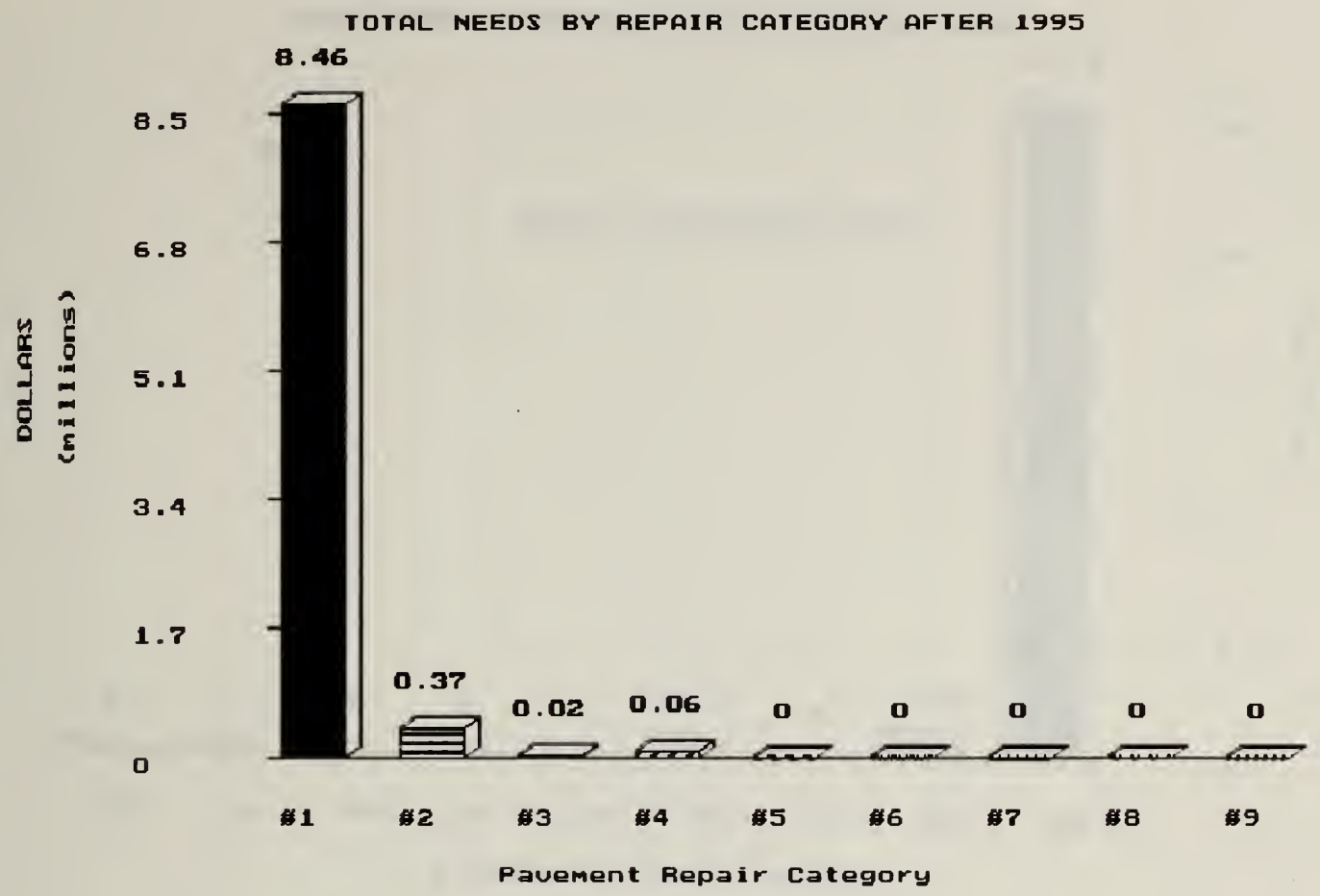
SOUTHWICK


TOTAL NEEDS BY REPAIR CATEGORY AFTER 1993
6.19
1.22
0.15
0.07
0
0
0
0
0
6.2
5.0
3.8
2.5
1.3
0
DOLLARS
(millions)
#1
#2
#3
#4
#5
#6
#7
#8
#9
Pavement Repair Category

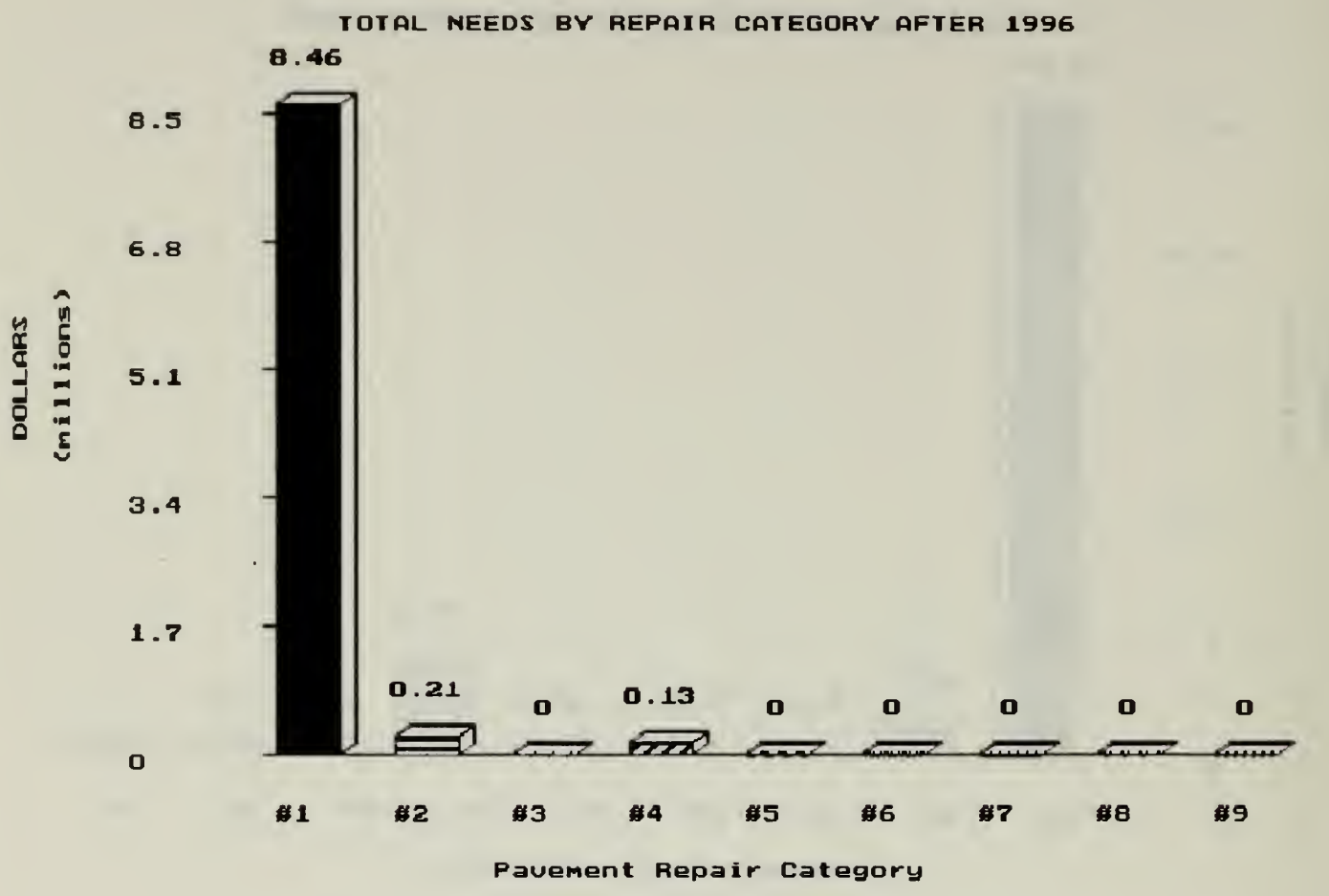
SOUTHWICK


TOTAL NEEDS BY REPAIR CATEGORY AFTER 1994
6.9
0.99
0.07
0.02
0
0
0
0
0
7.0
5.6
4.2
2.8
1.4
0
DOLLARS (millions)
#1
#2
#3
#4
#5
#6
#7
#8
#9
Pavement Repair Category

SOUTHWICK


TOTAL NEEDS BY REPAIR CATEGORY AFTER 1995
8.46
8.5
6.8
5.1
3.4
1.7
0
DOLLARS
(millions)
0.37
0.02
0.06
0
0
0
0
0
#1
#2
#3
#4
#5
#6
#7
#8
#9
Pavement Repair Category

SOUTHWICK


TOTAL NEEDS BY REPAIR CATEGORY AFTER 1996
8.46
8.5
6.8
5.1
3.4
1.7
0
DOLLARS
(millions)
0.21
0
0.13
0
0
0
0
0
#1
#2
#3
#4
#5
#6
#7
#8
#9
Pavement Repair Category

Budget to get to optimal PCI level

SOUTHWICK
Plan Budget Input Data
11/03/92

Available Budget For
Asphalt Pavement Improvements

Begin Plan in Year: 1992
Use Inflation Rate: 5.00 %

Year	Total
1992	$ 5651
1993	$ 332
1994	$ 50
1995	$ 5
1996	$ 306
1997	$ 0
1998	$ 0
1999	$ 0
2000	$ 0
2001	$ 0
2002	$ 0
2003	$ 0
2004	$ 0
2005	$ 0
2006	$ 0
2007	$ 0
2008	$ 0
2009	$ 0
2010	$ 0
2011	$ 0
Total	$ 6344

SOUTHWICK
Budget Work Screen Data
11/03/92

Asphalt Budget Work Screen

Functional Classification	PCI:	Maximum Desired Percentage Within Index Range # 1	# 2	# 3	# 4	All Ranges
Arterial		0 %	0 %	0 %	0 %	100 %
Collector		0 %	0 %	0 %	0 %	100 %
Local		0 %	0 %	0 %	0 %	100 %

SOUTHWICK
Asphalt Budget Report
11/03/92

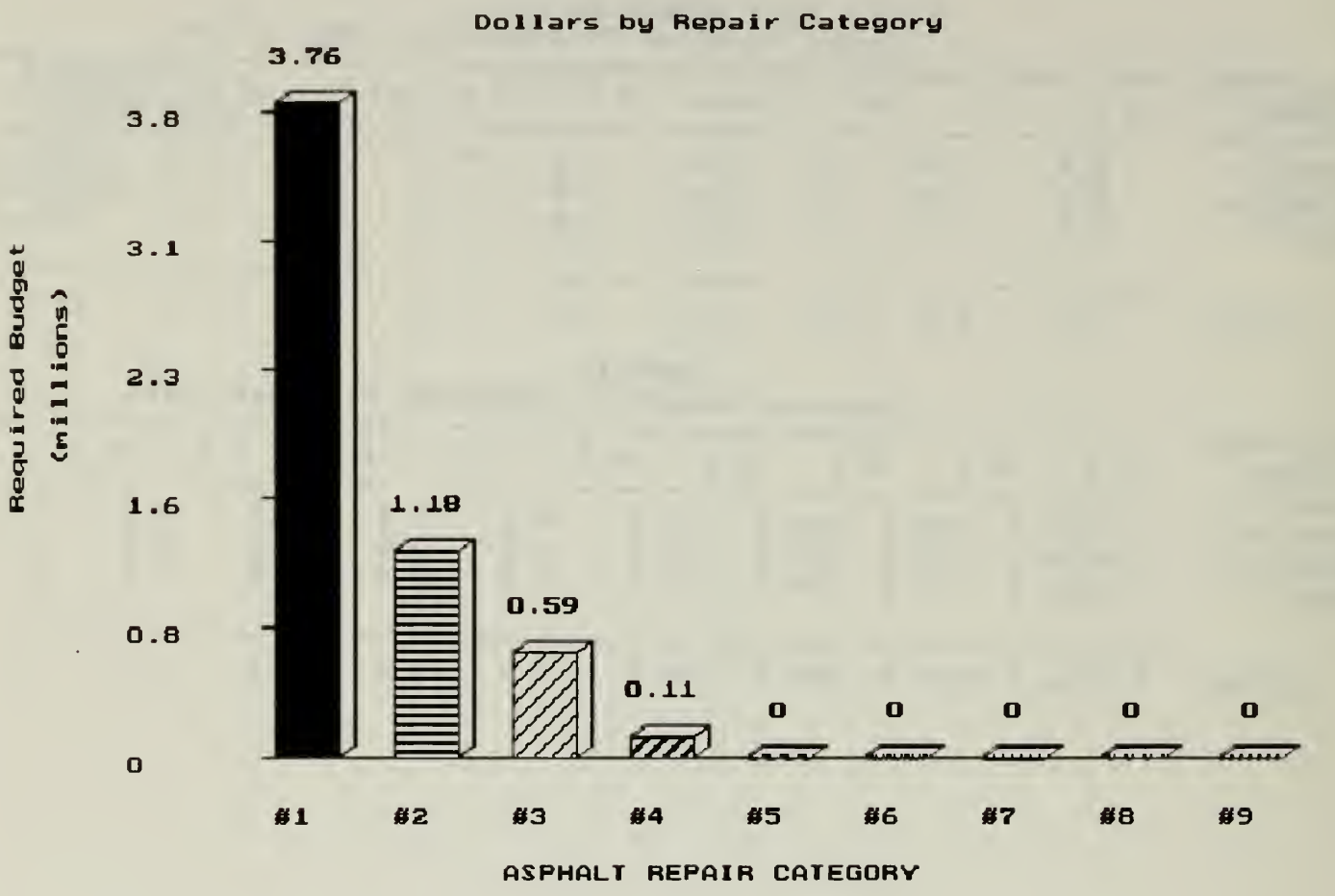
Asphalt
Number Of Miles To Improve By Repair Type

Functional Class	# 1	# 2	# 3	# 4	# 5	# 6	# 7	# 8	# 9
Arterial	3.0	1.6	5.0	0.0	0.0	0.0	0.0	0.0	0.0
Collector	4.2	4.4	4.6	1.1	0.0	0.0	0.0	0.0	0.0
Local	3.1	3.7	4.4	7.6	0.4	0.0	0.0	0.0	0.0
TOTAL:	10.3	9.8	14.0	8.7	0.4	0.0	0.0	0.0	0.0

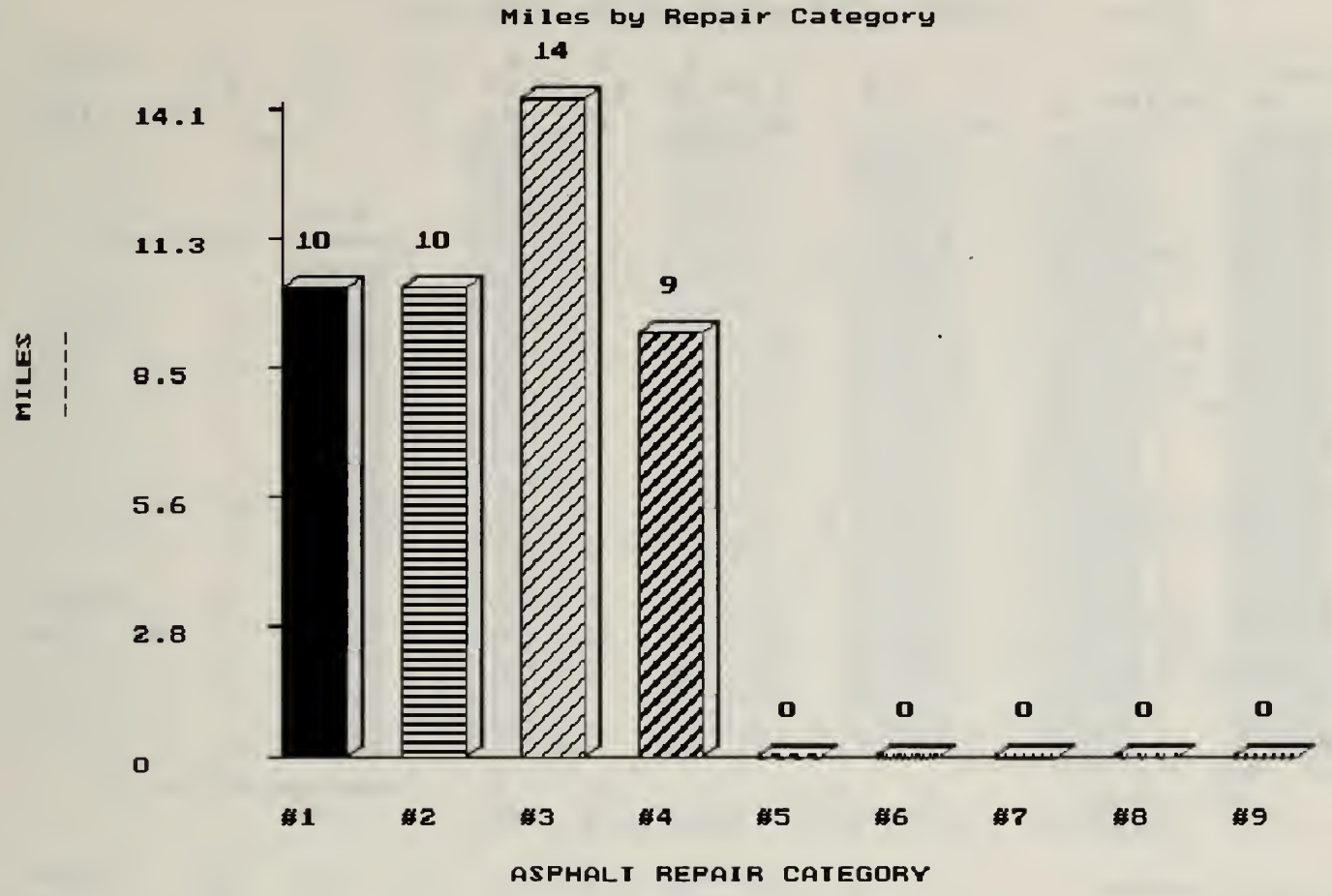
Asphalt
Required Budget in THOUSANDS By Repair Type

Functional Class	# 1	# 2	# 3	# 4	# 5	# 6	# 7	# 8	# 9
Arterial	$ 1004	$ 205	$ 250	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0
Collector	$ 1634	$ 534	$ 189	$ 17	$ 0	$ 0	$ 0	$ 0	$ 0
Local	$ 1124	$ 443	$ 152	$ 97	$ 0	$ 0	$ 0	$ 0	$ 0
TOTAL:	$ 3762	$ 1183	$ 592	$ 114	$ 0	$ 0	$ 0	$ 0	$ 0

SOUTHWICK


Dollars by Repair Category
Required Budget (millions)
3.8
3.1
2.3
1.6
0.8
0
3.76
1.18
0.59
0.11
0
0
0
0
0
#1
#2
#3
#4
#5
#6
#7
#8
#9
ASPHALT REPAIR CATEGORY

SOUTHWICK


Miles by Repair Category
14
14.1
11.3
8.5
5.6
2.8
0
MILES
10
10
9
0
0
0
0
0
#1
#2
#3
#4
#5
#6
#7
#8
#9
ASPHALT REPAIR CATEGORY

FUTURE CONDITION PROJECTION REPORT
BASED ON PCI

After Year - 1992

PCI Range:	1	2	3	4	5	Average PCI =	95
Miles	0.9	0.0	0.0	1.3	52.0		

Repair Number:	1	2	3	4	5	6	7	8	9	Total
Miles	1	0	0	1	52	0	0	0	0	54
Thousand Dollars	317	0	0	15	0	0	0	0	0	332

After Year - 1993

PCI Range:	1	2	3	4	5	Average PCI =	95
Miles	0.0	0.0	0.0	3.6	50.6		

Repair Number:	1	2	3	4	5	6	7	8	9	Total
Miles	0	0	0	4	51	0	0	0	0	54
Thousand Dollars	0	0	0	50	0	0	0	0	0	50

After Year - 1994

PCI Range:	1	2	3	4	5	Average PCI =	94
Miles	0.0	0.0	0.0	0.0	54.2		

Repair Number:	1	2	3	4	5	6	7	8	9	Total
Miles	0	0	0	0	54	0	0	0	0	54
Thousand Dollars	0	0	0	0	0	0	0	0	0	0

After Year - 1995

PCI Range:	1	2	3	4	5	Average PCI =	92
Miles	0.0	0.0	0.0	23.4	30.8		

Repair Number:	1	2	3	4	5	6	7	8	9	Total
Miles	0	0	0	23	31	0	0	0	0	54
Thousand Dollars	0	0	0	306	0	0	0	0	0	306

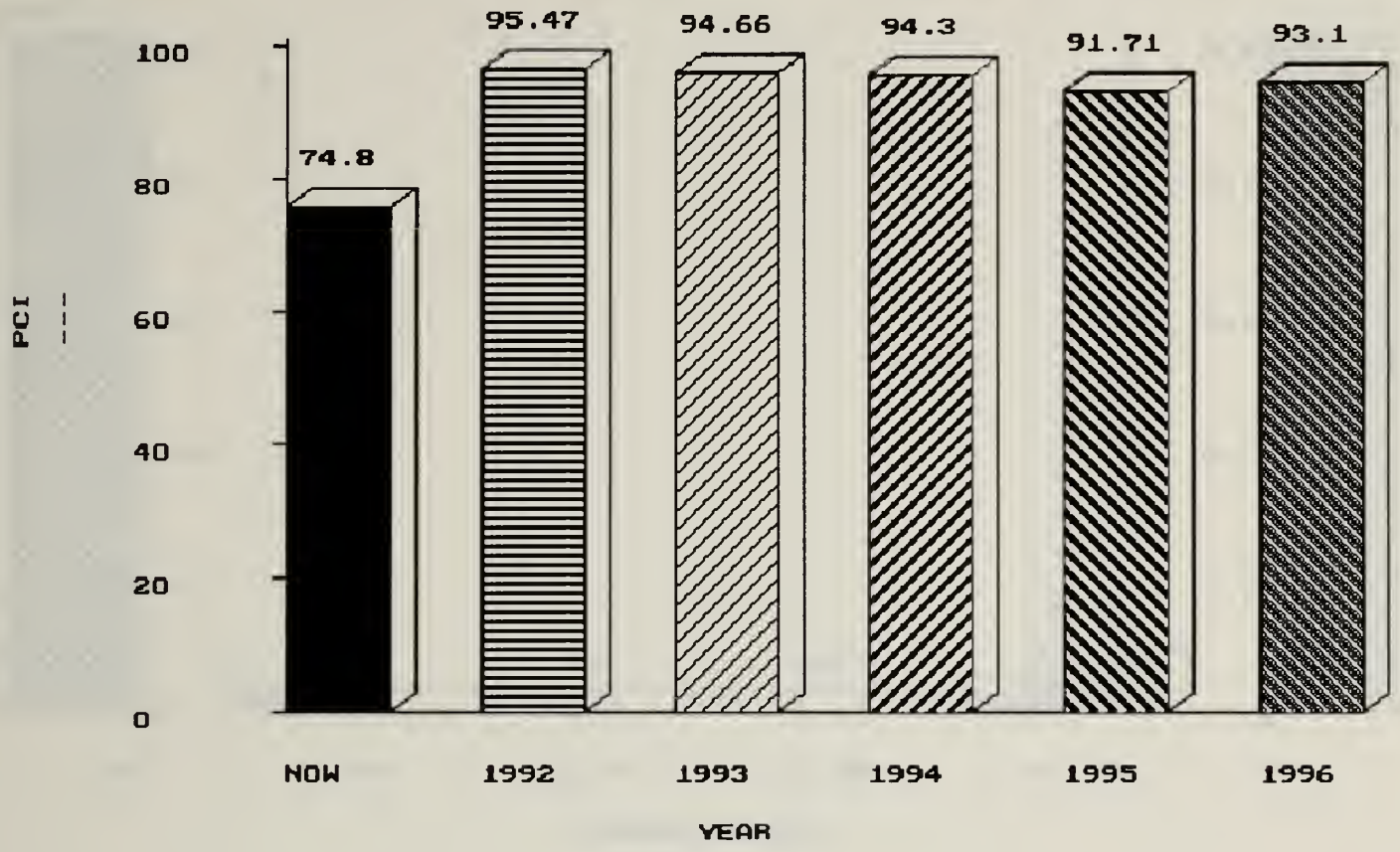
After Year - 1996

PCI Range:	1	2	3	4	5	Average PCI =	93
Miles	0.0	0.0	0.0	4.2	50.0		

Repair Number:	1	2	3	4	5	6	7	8	9	Total
Miles	0	0	0	4	50	0	0	0	0	54
Thousand Dollars	0	0	0	49	0	0	0	0	0	49

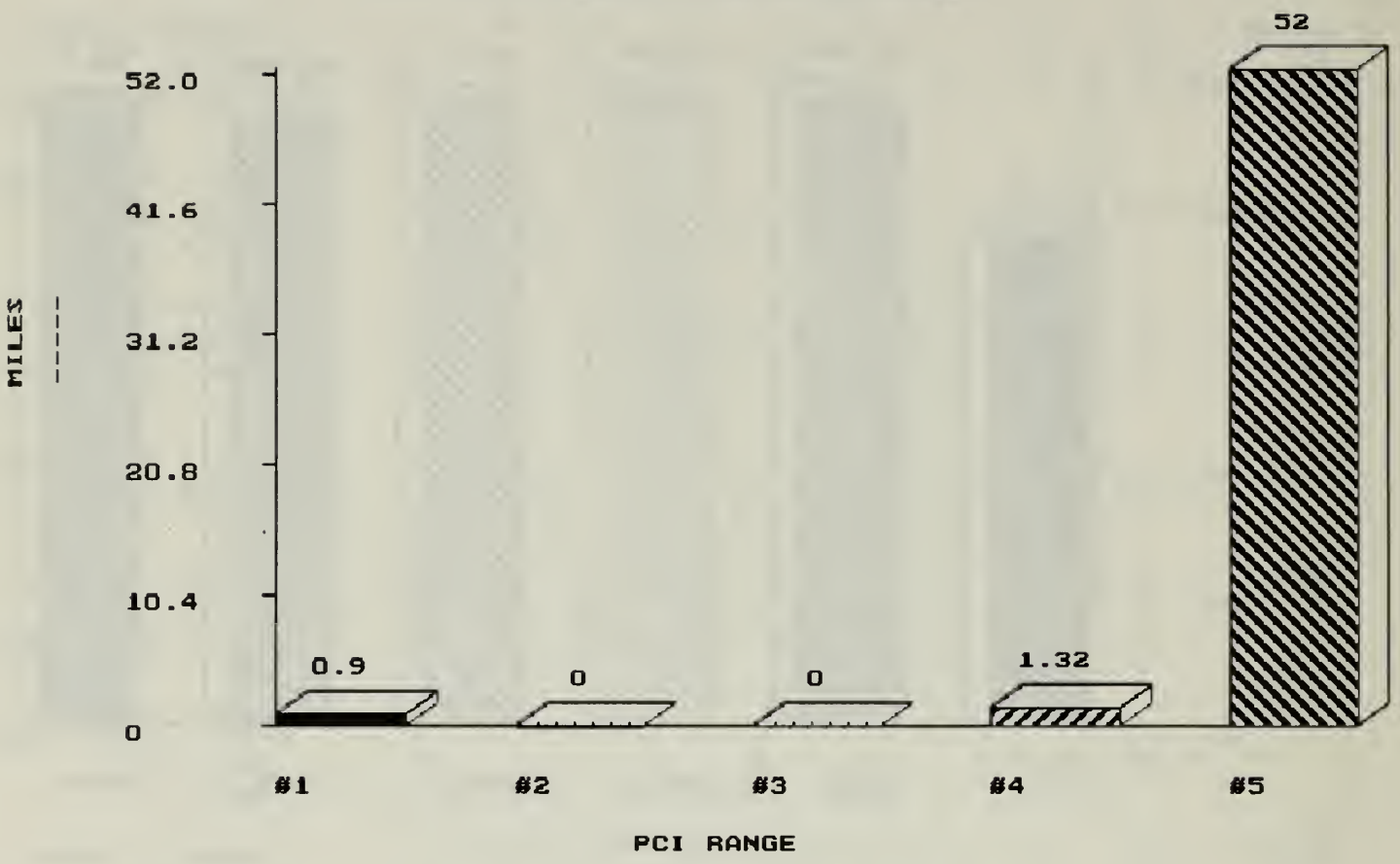
SOUTHWICK

ESTIMATED AVERAGE FUTURE PCI VALUES



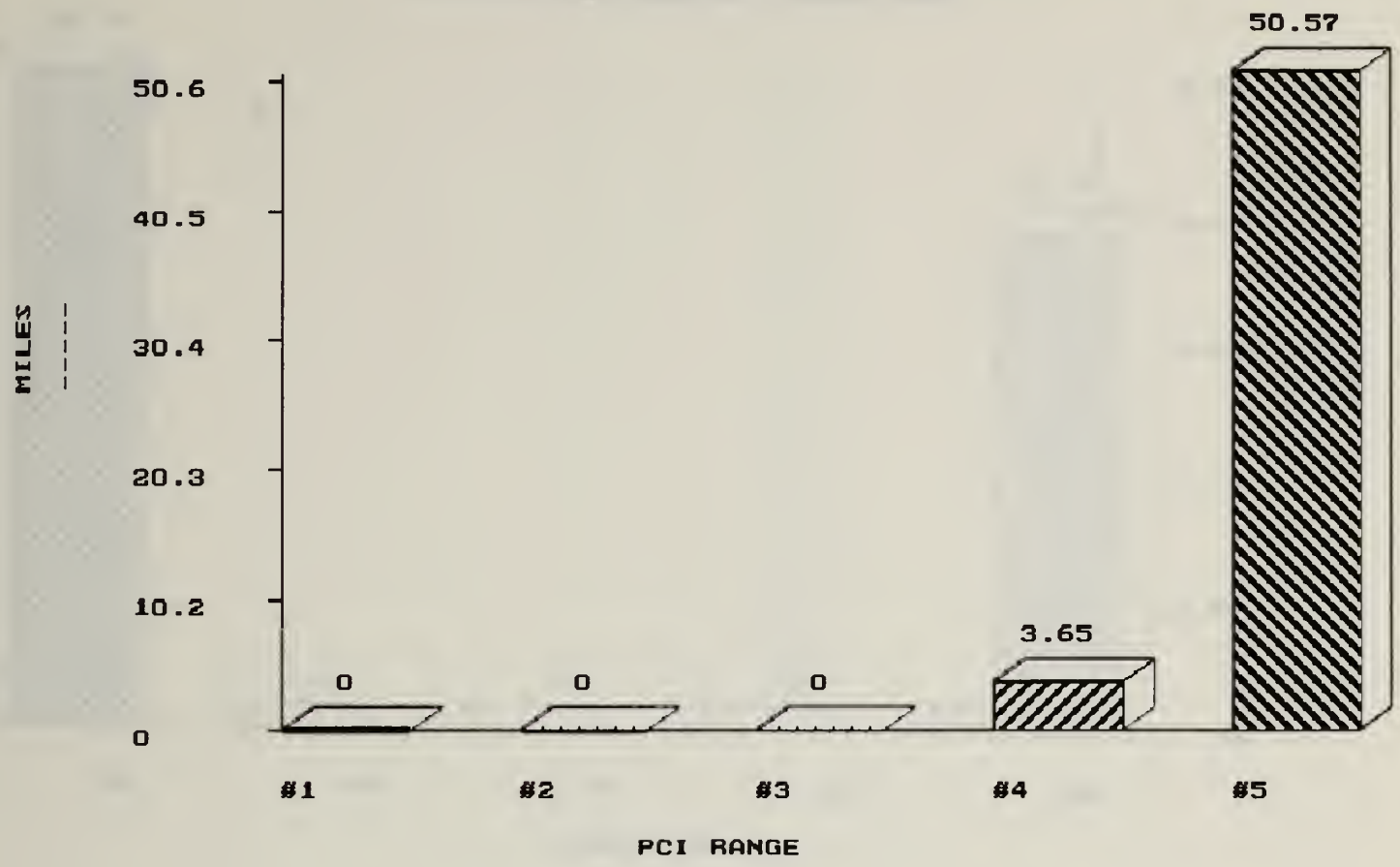
SOUTHWICK

PCI DISTRIBUTION AFTER 1992



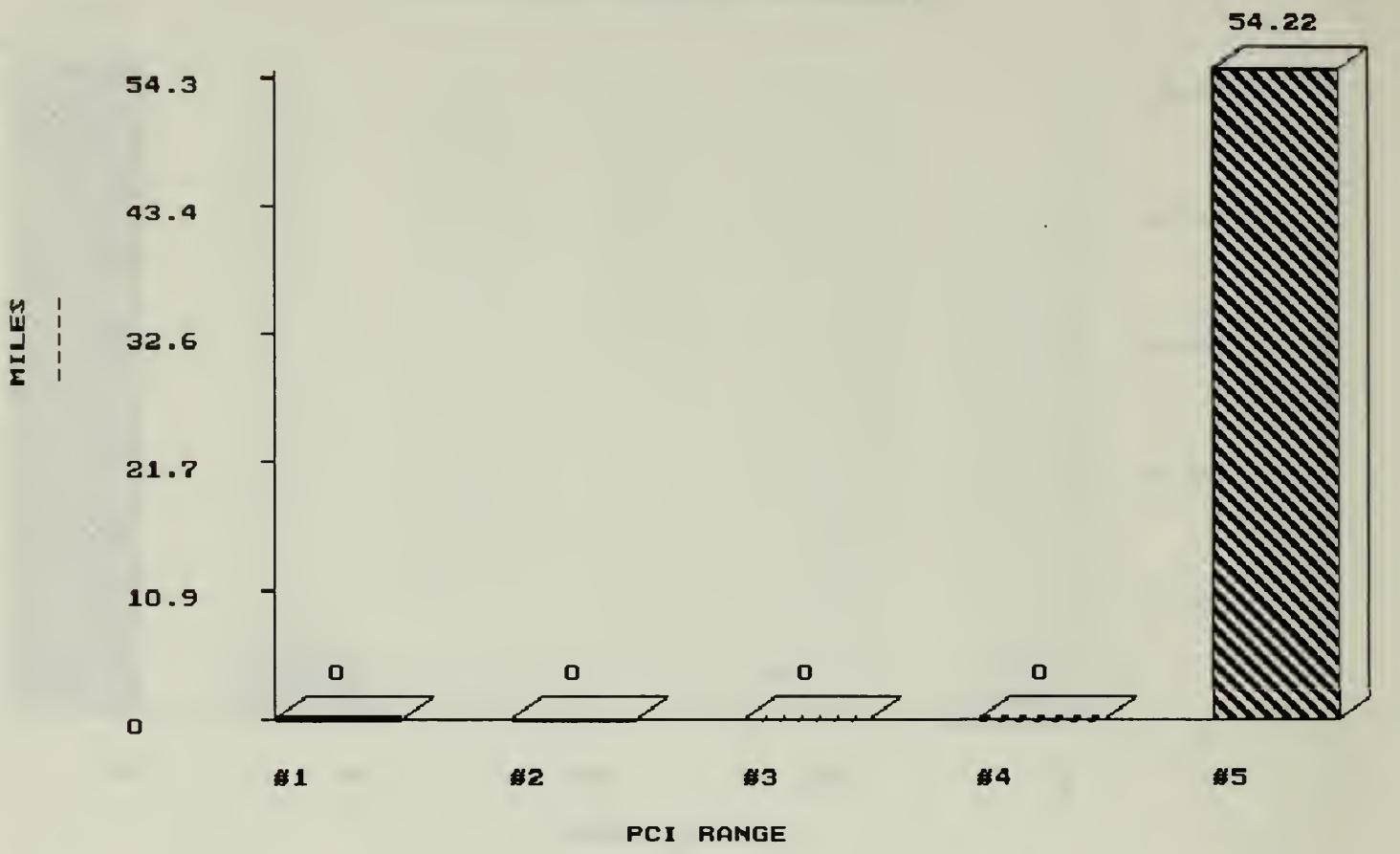
SOUTHWICK

PCI DISTRIBUTION AFTER 1993



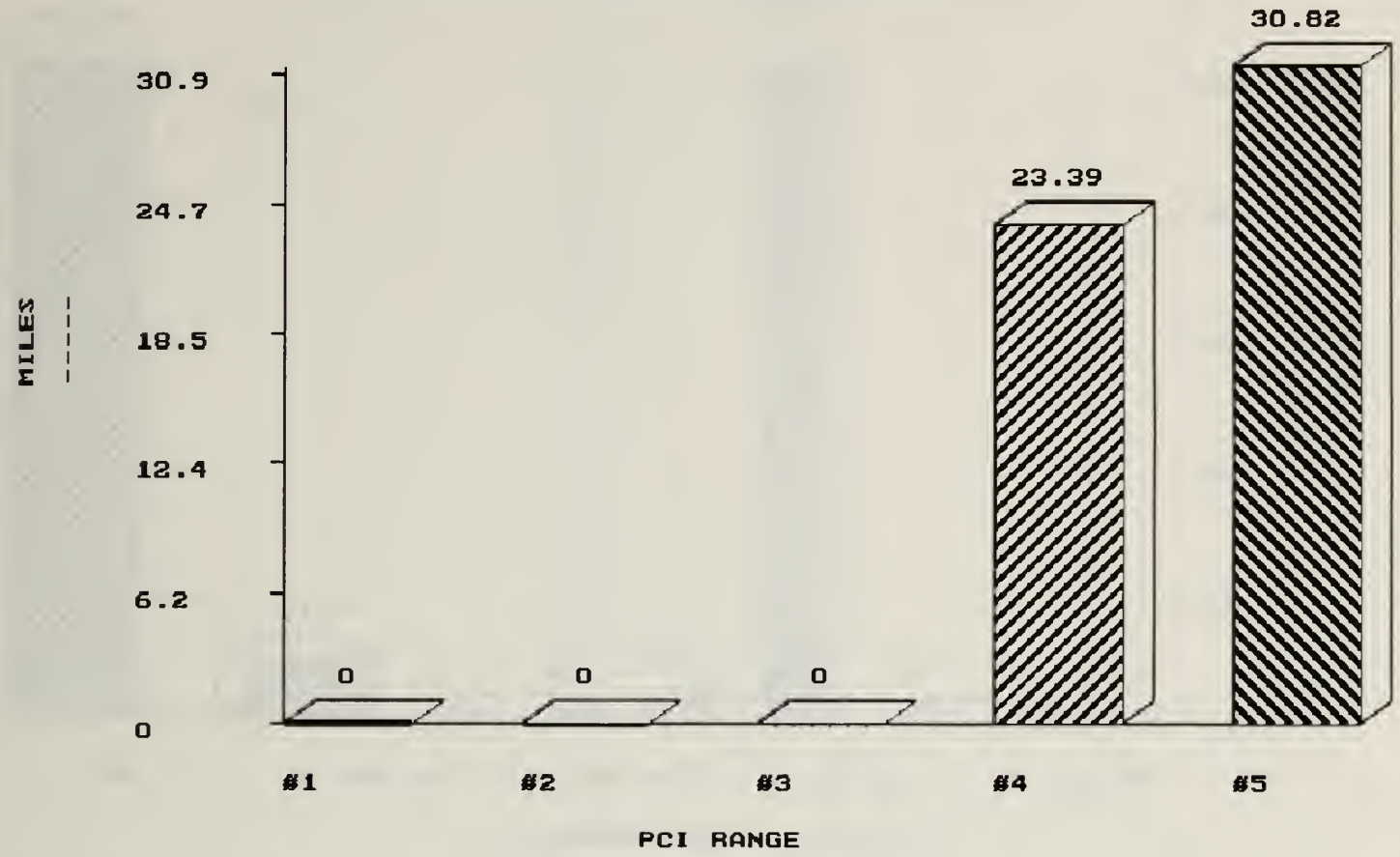
SOUTHWICK

PCI DISTRIBUTION AFTER 1994



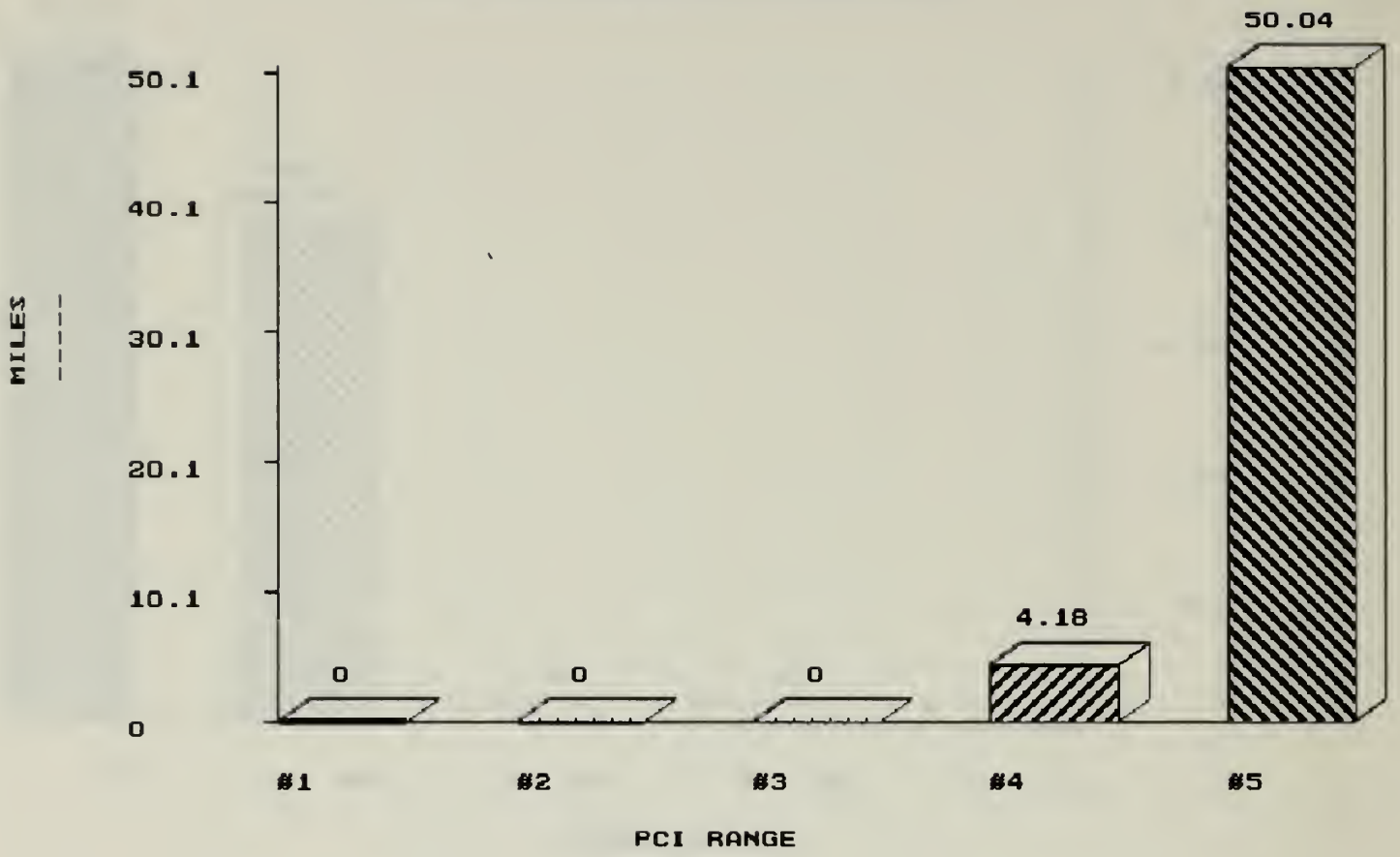
SOUTHWICK

PCI DISTRIBUTION AFTER 1995



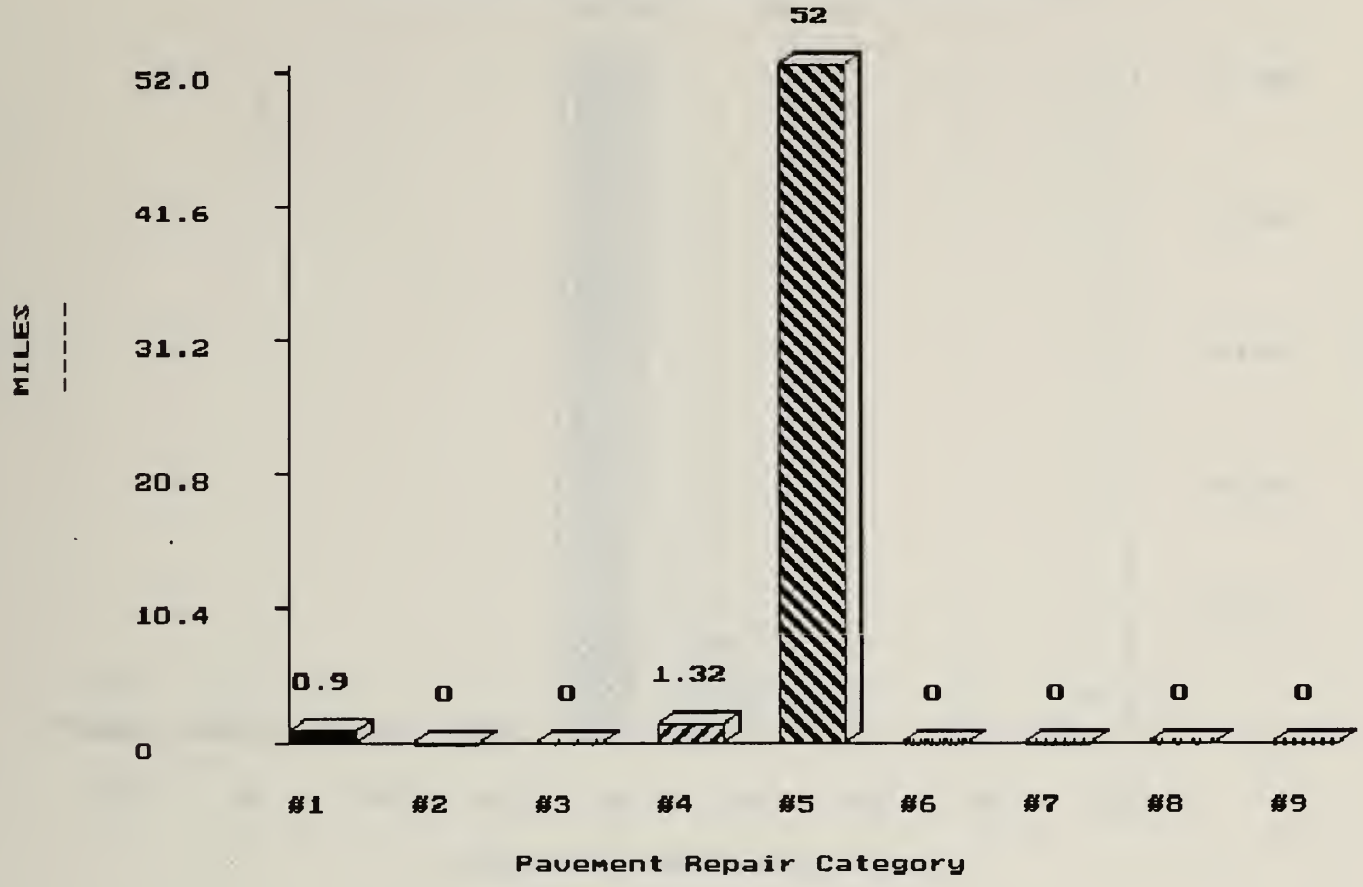
SOUTHWICK

PCI DISTRIBUTION AFTER 1996



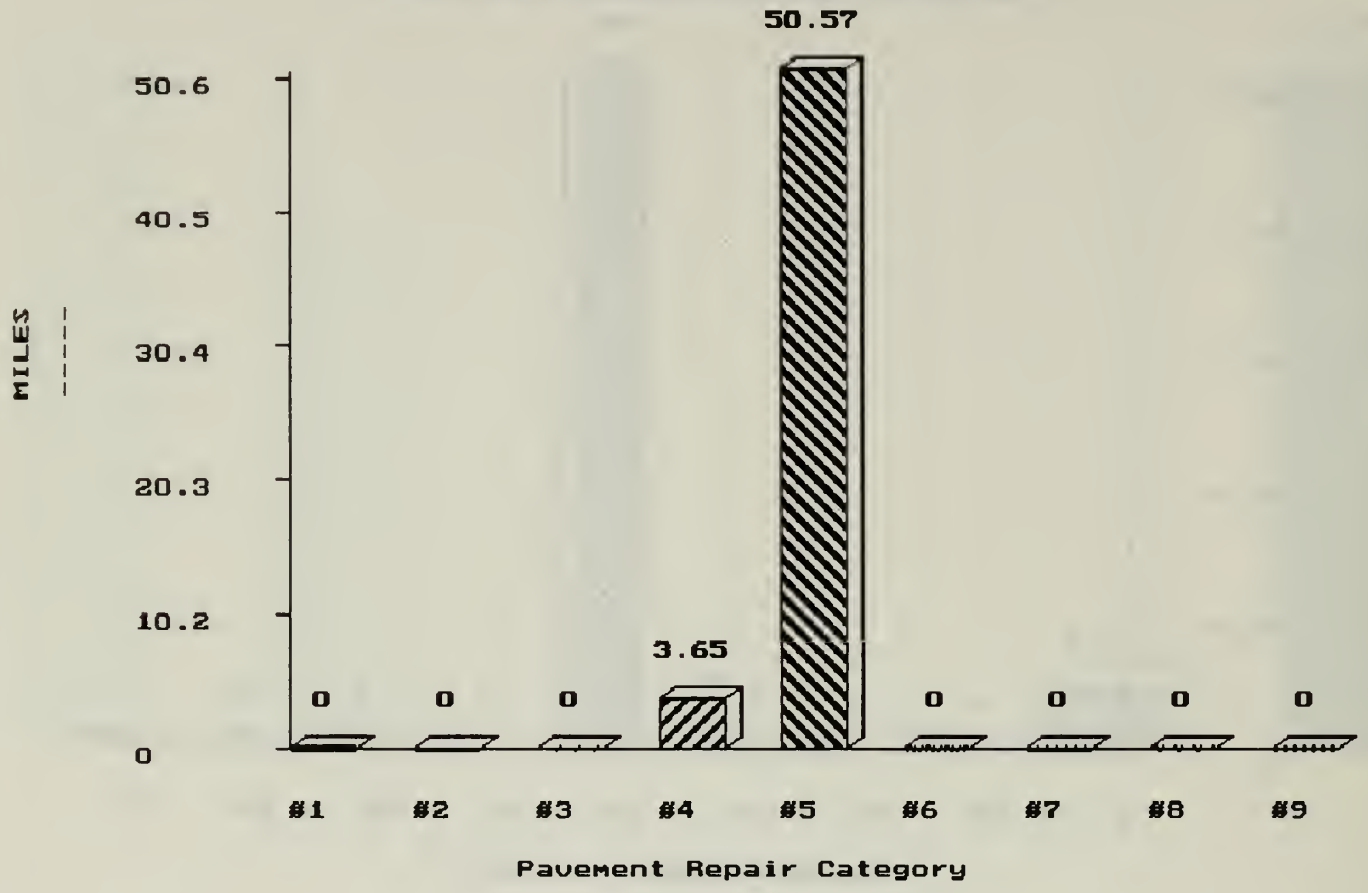
SOUTHWICK

MILES BY REPAIR CATEGORY AFTER 1992

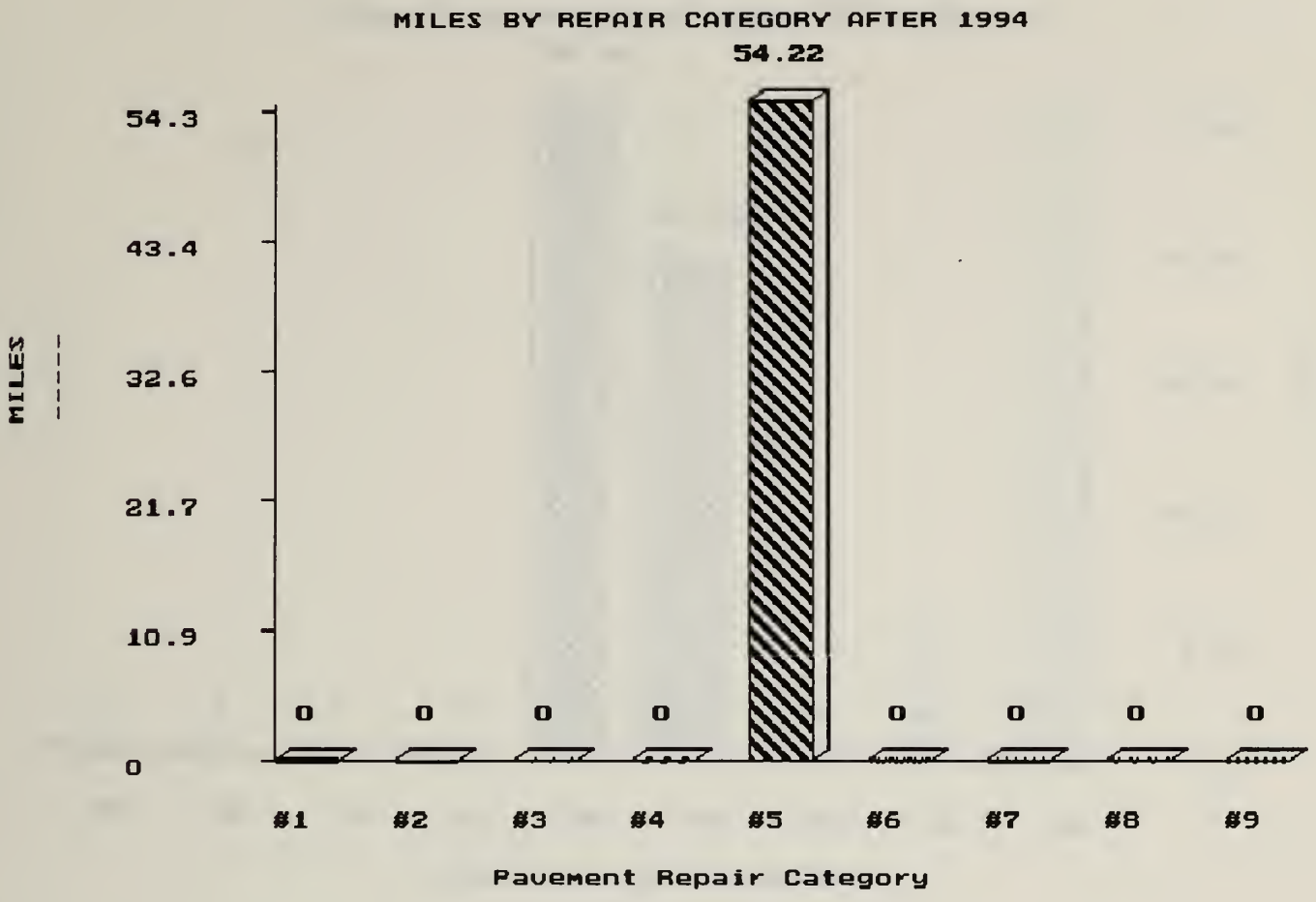


SOUTHWICK

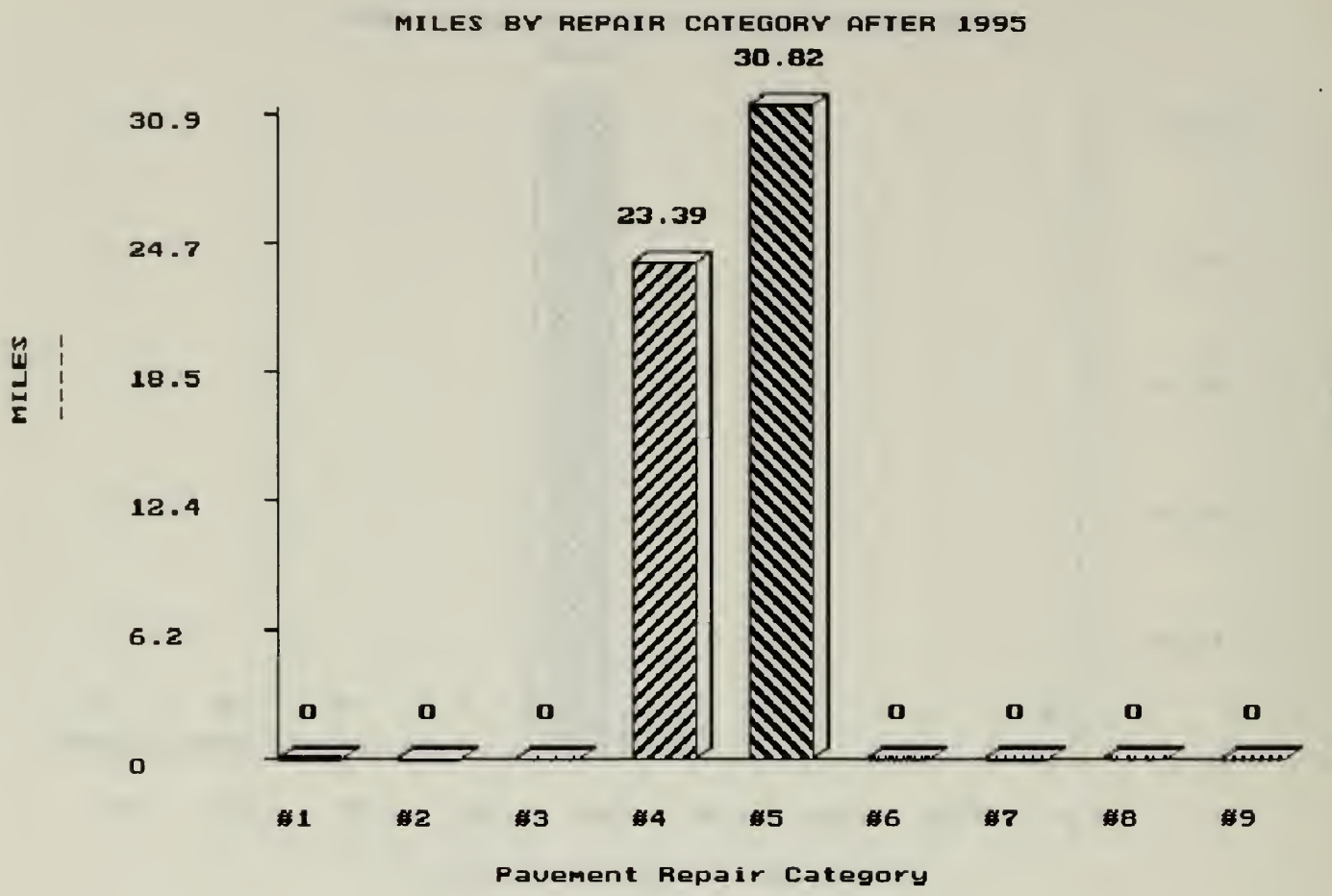
MILES BY REPAIR CATEGORY AFTER 1993



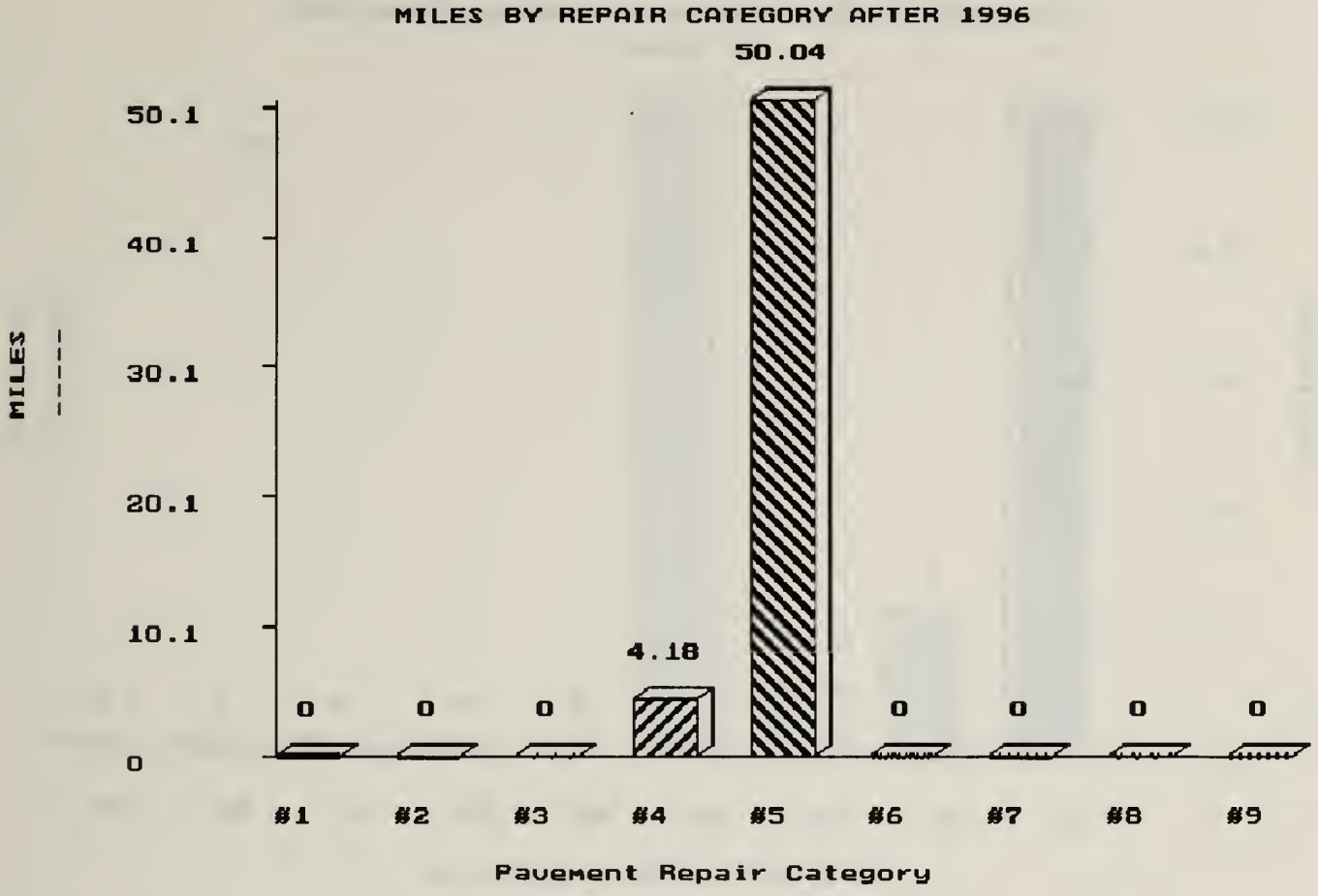
SOUTHWICK


MILES BY REPAIR CATEGORY AFTER 1994
54.22
54.3
43.4
32.6
21.7
10.9
0
MILES
0
0
0
0
0
0
0
0
#1
#2
#3
#4
#5
#6
#7
#8
#9
Pavement Repair Category

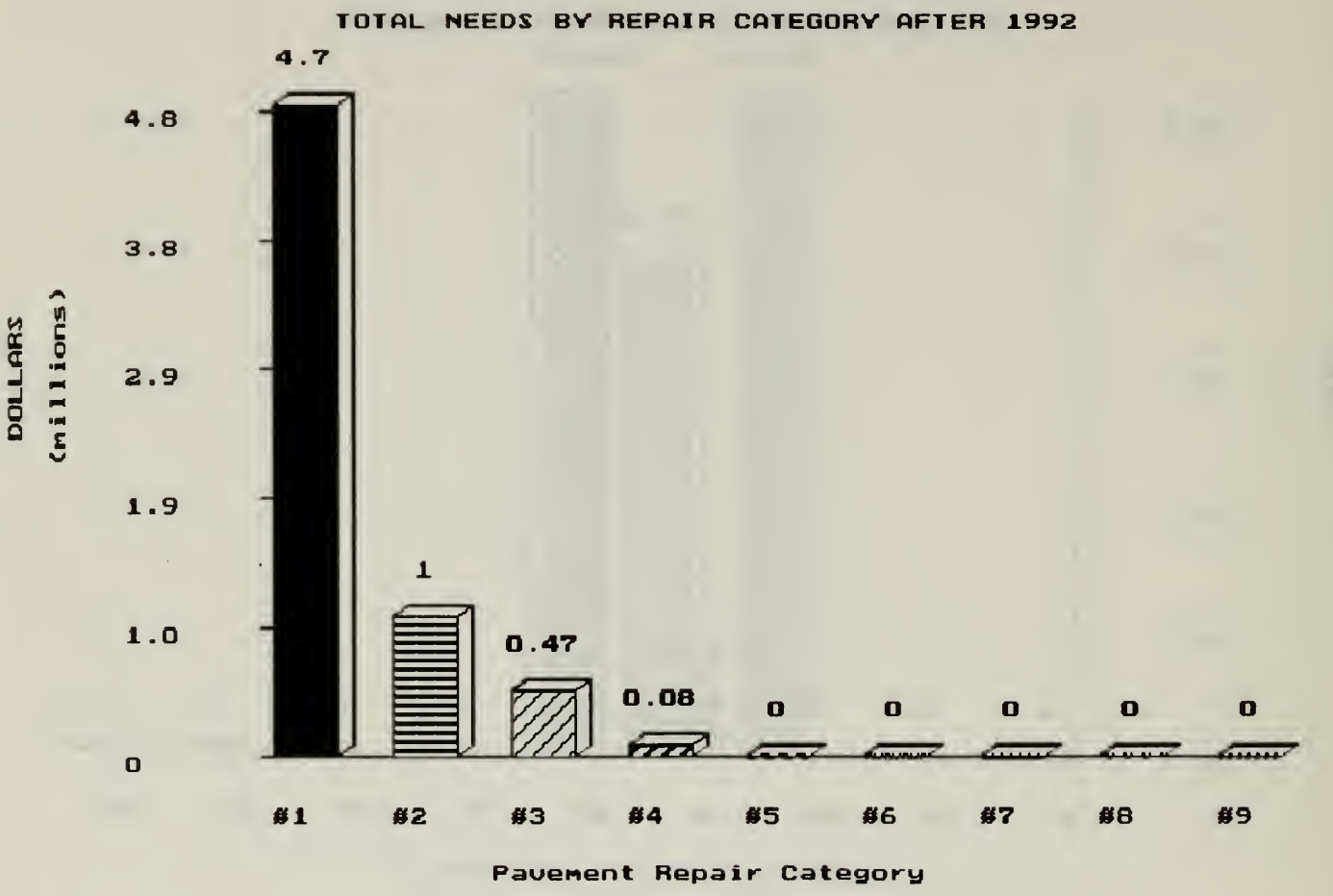
SOUTHWICK


MILES BY REPAIR CATEGORY AFTER 1995
30.82
23.39
30.9
24.7
18.5
12.4
6.2
0
MILES
0
0
0
0
0
0
0
#1
#2
#3
#4
#5
#6
#7
#8
#9
Pavement Repair Category

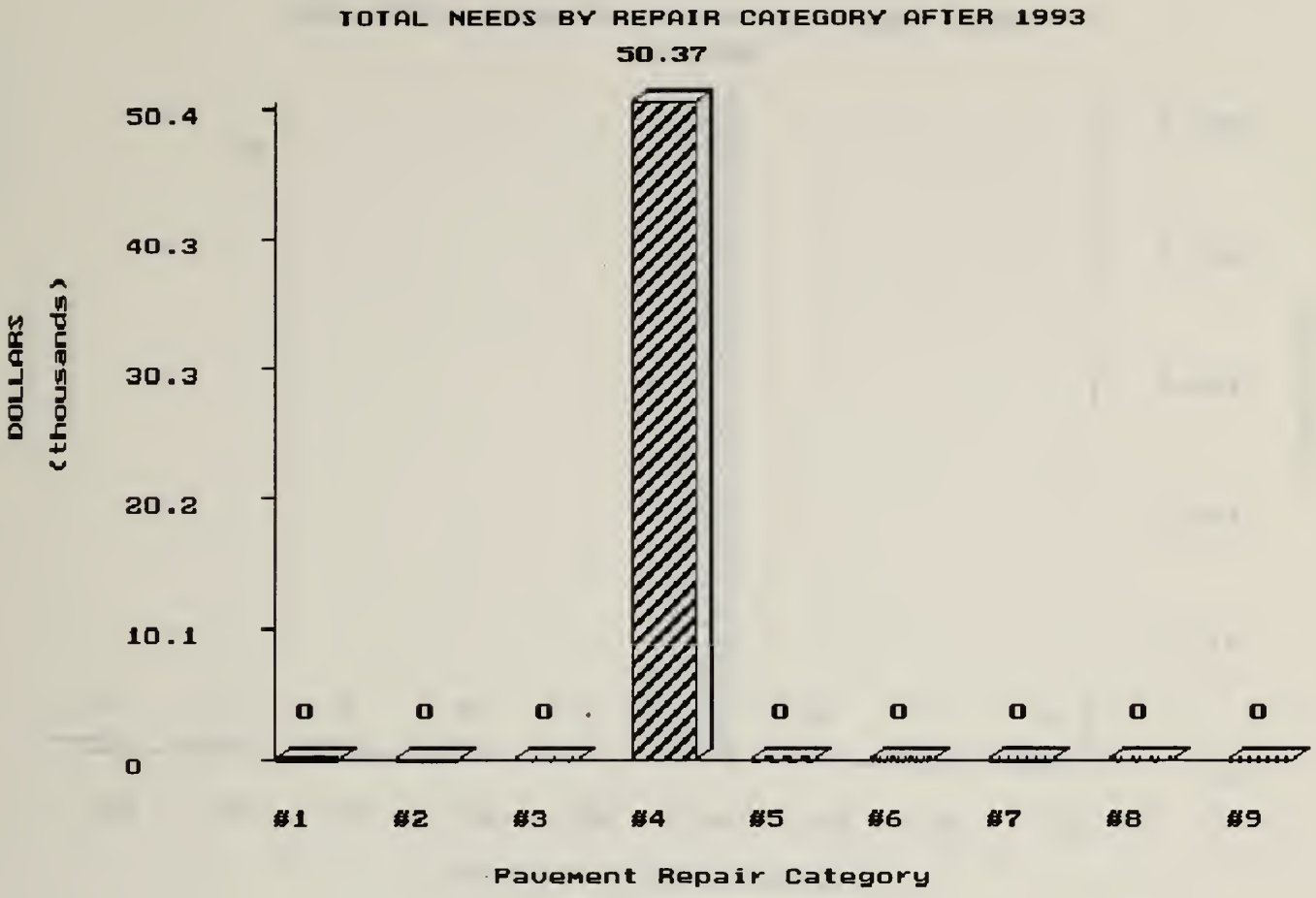
SOUTHWICK


MILES BY REPAIR CATEGORY AFTER 1996
50.04
50.1
40.1
30.1
20.1
10.1
0
MILES
4.18
0
0
0
0
0
0
0
#1
#2
#3
#4
#5
#6
#7
#8
#9
Pavement Repair Category

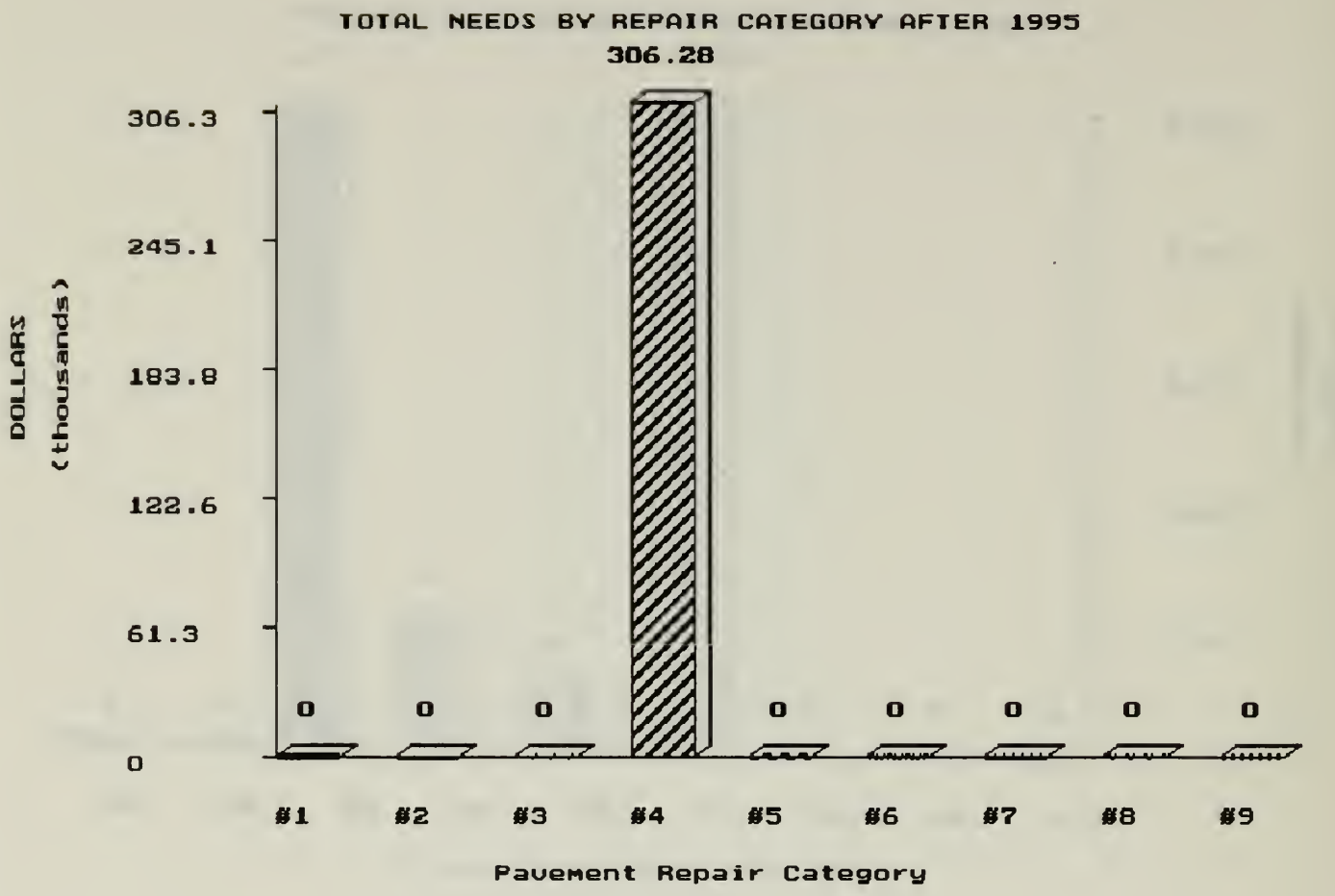
SOUTHWICK


TOTAL NEEDS BY REPAIR CATEGORY AFTER 1992
DOLLARS (millions)
4.8
3.8
2.9
1.9
1.0
0
4.7
1
0.47
0.08
0
0
0
0
0
#1
#2
#3
#4
#5
#6
#7
#8
#9
Pavement Repair Category

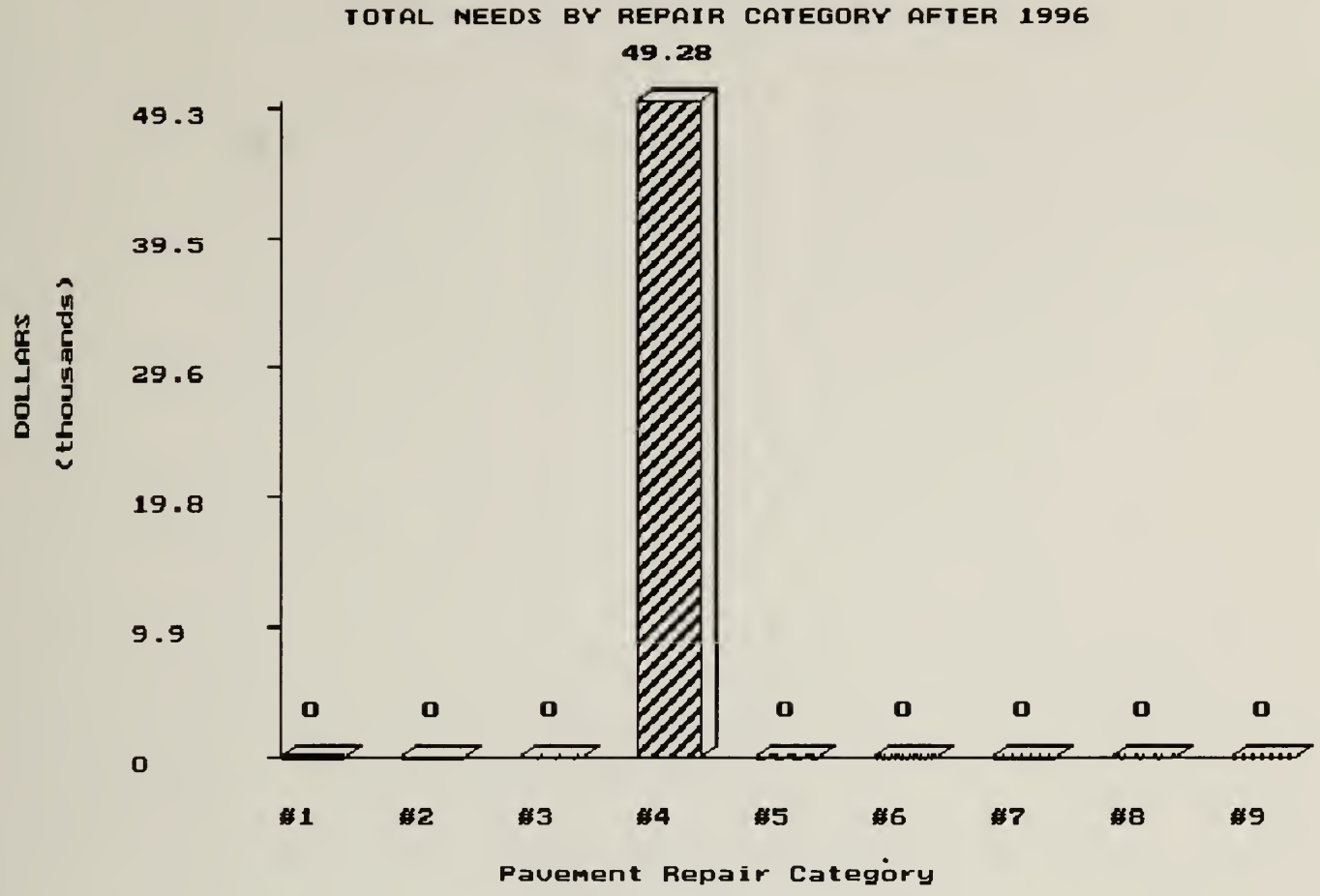
SOUTHWICK


TOTAL NEEDS BY REPAIR CATEGORY AFTER 1993
50.37
50.4
40.3
30.3
20.2
10.1
0
DOLLARS
(thousands)
0
0
0
0
0
0
0
0
#1
#2
#3
#4
#5
#6
#7
#8
#9
Pavement Repair Category

SOUTHWICK


TOTAL NEEDS BY REPAIR CATEGORY AFTER 1995
306.28
306.3
245.1
183.8
122.6
61.3
0
DOLLARS
(thousands)
0
0
0
0
0
0
0
0
#1
#2
#3
#4
#5
#6
#7
#8
#9
Pavement Repair Category

SOUTHWICK


TOTAL NEEDS BY REPAIR CATEGORY AFTER 1996
49.28
49.3
39.5
29.6
19.8
9.9
0
DOLLARS
(thousands)
0
0
0
0
0
0
0
0
#1
#2
#3
#4
#5
#6
#7
#8
#9
Pavement Repair Category